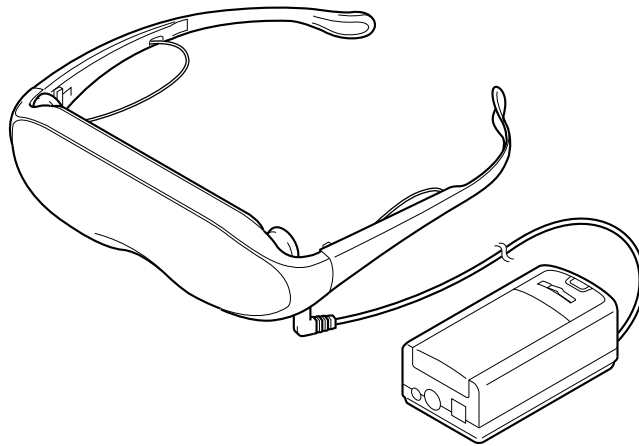


PLM-A35E

SERVICE MANUAL

AEP Model



Personal LCD Monitor
Glasstron[™] Lite

SPECIFICATIONS

Power supply

AC power adaptor: AC-PLM2
100-240 V AC, 50/60 Hz, 16 W
Output voltage 9 V, 1.3 A
Battery pack: NP-F550 (not supplied)

Power consumption

1.8 W Approx.

Operating temperature

5°C to 35°C (41°F to 95°F)

Storage temperature

-10°C to 60°C (14°F to 140°F)

Dimensions

Display unit:
Approx. 173 × 53 × 56 mm
(Approx. 6 ⁷/₈ × 2 ¹/₈ × 2 ¹/₄ inches)
(w/h/d, folded up)

Power supply box:

Approx. 53 × 39 × 104 mm
(Approx. 2 ¹/₈ × 1 ⁹/₁₆ × 4 ¹/₈ inches)
(w/h/d)
not including projecting parts and controls

Mass

Display unit: Approx. 100 g (4 oz)
Power supply box: Approx. 90 g (3.2 oz)

Video signal

PAL colour, EIA standards

Audio/video input

Special minijack
1 V_{p-p}, 75 ohms, unbalanced, sync negative

S video input

4-pin mini DIN
Y: 1 V_{p-p}, 75 ohms, unbalanced, sync negative
C: 0.286 V_{p-p}, 75 ohms, unbalanced, sync negative

Supplied accessories

AC power adaptor AC-PLM2 (1)
Mains lead (1)
Audio/video cable (special miniplug ↔ phono plug) (3 m) (1)
Audio/video cable (special miniplug ↔ stereo miniplug) (0.5 m) (1)
Plug adaptors
(phono jack ↔ phono jack) (3)
Nose piece (black) (1)
Side piece pads (2)
Operating instructions manual (1)
Safety Instructions (1)
Warranty (1)

Design and specifications are subject to change without notice.

GLASSTRON

SONY[®]

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

This section is extracted from instruction manual (3-868-186-31).

Glasstron is a brand-new concept in visual display

Congratulations on your purchase of a Sony Glasstron Personal Viewer. The Glasstron, using current technology in small, lightweight visual displays, provides a television viewing experience similar to watching a 52-inch television from a distance of approximately 2 m (6.6 feet). (Viewing experience may differ according to individual perception.)

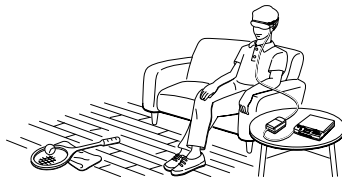
The Glasstron Personal Viewer creates an image through two separate liquid crystal displays, in close proximity to your eyes. To insure your safe use of the Glasstron, please become familiar with its basic operations, including proper fitting instructions, and be aware of any symptoms of eye fatigue or other discomfort you may experience.

WARNING

YOUR FAILURE TO FOLLOW THESE OPERATING INSTRUCTIONS MAY RESULT IN EYE FATIGUE, EYE IMPAIRMENT, OR OTHER EYE INJURY, PROPERTY DAMAGE OR DEATH.

WARNING

THIS PRODUCT SHOULD NOT BE USED BY CHILDREN AGE 15 OR YOUNGER. THE EYES OF CHILDREN ARE STILL DEVELOPING AND MAY BE ADVERSELY AFFECTED FROM USE OF THIS PRODUCT.



Note on the LCD (Liquid Crystal Display)

The LCD screen is made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is not a malfunction. (Effective dots: more than 99.99%)

GB

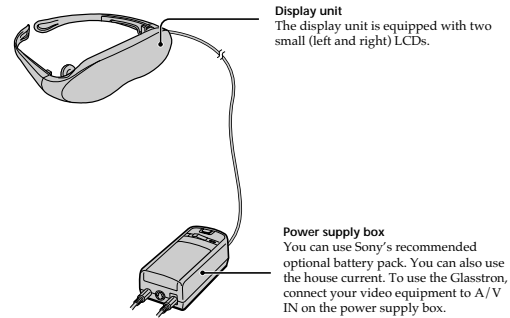
About the Glasstron

Caution: The screen is always right in front of you.

The Glasstron is a face-mounted display. With this type of display, the screen is always in front of you, even if you move your head. Because of this feature, you can concentrate on the screen more easily compared with ordinary TVs, and you have a sense of being in the action.

- It is easy to adjust the Glasstron to your eyes. You can use the display unit even while wearing glasses.
- Every time you use the Glasstron, the adjustment screen appears to help you adjust the display unit properly. You can also check whether the left and right screen positions are properly aligned or not.
- If you keep using the Glasstron continuously for three hours, a warning appears on the screen and the power will turn off automatically.

The Glasstron consists of the following items:



Features

- A powerful, big screen experience comparable to watching a 52-inch screen from approximately 2 m (6.6 feet) away.
- Handy portable folding display.
- The display unit weighs only 100 g (4 oz).
- Approximate continuous use for up to seven hours with Sony's recommended battery pack, NP-F550.

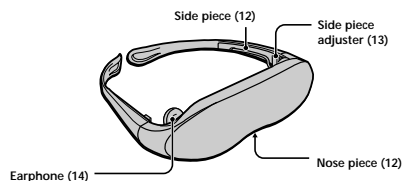
3-GB

5-GB

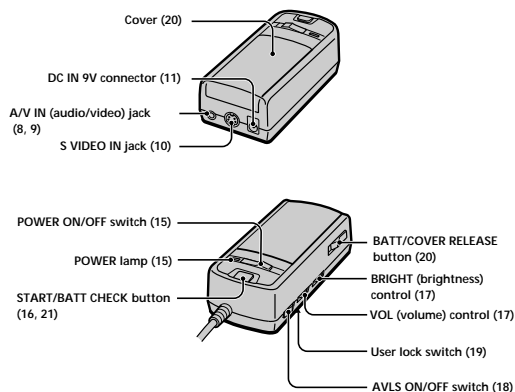
Locating the parts and controls

Refer to the pages indicated in parentheses () for details.

Display unit



Power supply box

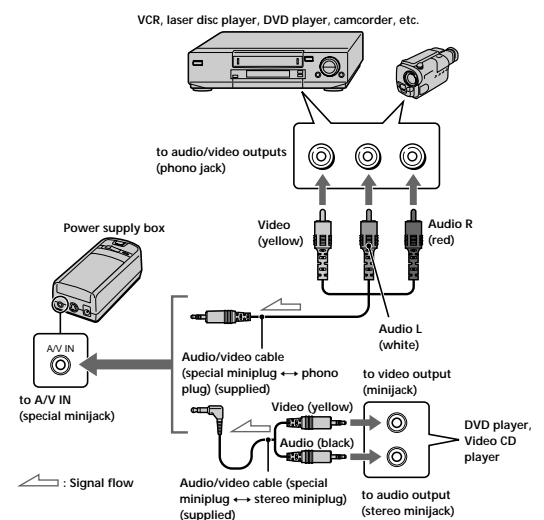


Getting Started

Connecting the Glasstron

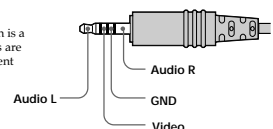
Connecting video equipment

Connect a VCR, laser disc player, DVD player, or camcorder to the power supply box as shown below. Two AV cables are supplied. Select the correct AV cable according to the shape of the connectors on the unit to be connected.



About the audio/video input jack

The audio/video input jack of the Glasstron is a special minijack, and the signal connections are aligned as shown on the right. This alignment may differ depending on the equipment.



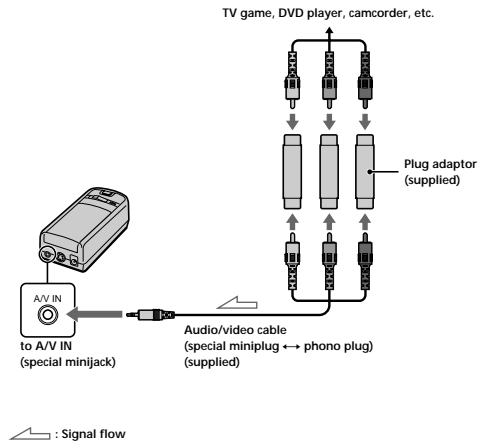
7-GB

8-GB

Confidential

Connecting other equipment

The plug adaptor (phono jack ↔ phono jack) is supplied. Use the plug adaptor according to the equipment you want to connect.



Getting Started

continued

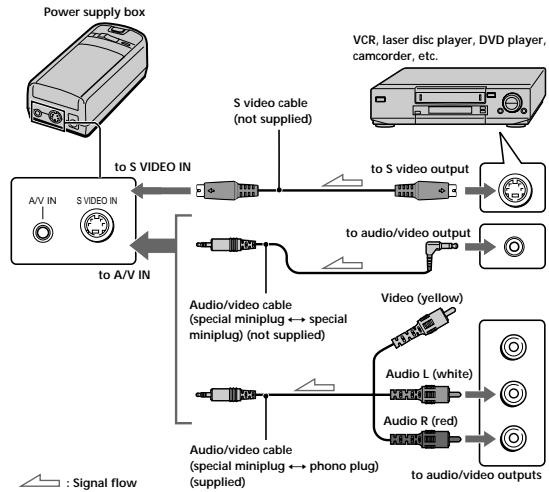
9-GB

10-GB

Connecting the Glasstron (continued)

If your video equipment has an S video jack

We recommend connecting the Glasstron to your video equipment using an S video cable and the audio/video cable to enjoy the highest quality pictures. In this case, you do not need to connect the video (yellow) plug. If you connect both the S video and video plugs, the S video signal is automatically selected.

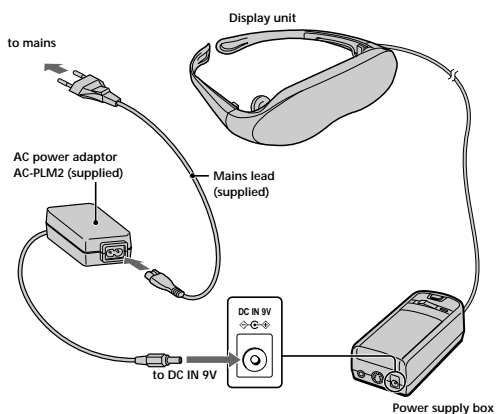


Notes

- Even if you use the supplied audio/video cable, the audio and video signals may not be carried to the Glasstron depending on the video source. In this case, contact your Sony dealer or local authorized Sony service facility.
- When you connect the Glasstron to the audio output jacks (phono jacks) of your video equipment, connect the Glasstron to both the right and left audio output jacks. If you connect the Glasstron to just one audio output jack, you will hear sound from only one of the stereo earphones.

Connecting the power source

Connect the AC power adaptor AC-PLM2 (supplied) to mains. Do not connect the power source until all other connections are complete.



Getting Started

11-GB

12-GB

Wearing the Glasstron

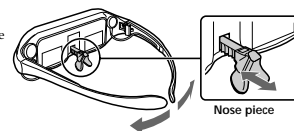
WARNING

- Failure to properly fit the product (see "Proper Fit," page 5 on the Safety Instructions) each time may result in eye fatigue, eye damage, or loss of visual functions and may result in accident or injury.
- This product should not be used by children age 15 or younger. The eyes of children are still developing and may be adversely affected by use of this product, and it may cause eye fatigue, eye damage, or loss of visual functions. In addition, this product may not be adjusted to fit a child's head.

If you normally wear glasses while watching TV, you can use the Glasstron while wearing glasses. When you take the Glasstron off, be careful that your regular glasses do not get caught on the Glasstron.

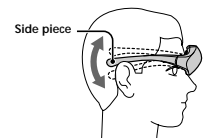
1 Adjust the nose piece and put on the Glasstron.

- Pull out the nose piece if you wear glasses.
- Open the side pieces by grasping the side piece tips and put on the Glasstron.
- **Caution:** Be careful not to poke your eyes with the side piece tips when putting the Glasstron on or off.



2 Adjust the angle of the display unit.

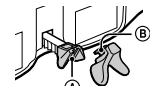
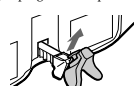
- Adjust the angle of the side pieces by grasping the side piece tips to adjust the display unit to the most suitable viewing position.
- You do not necessarily have to rest the side pieces on your ears.



To use the supplied nose piece

If you are still unable to have a full view of the screen or clear picture colour on the Glasstron after performing step 2 above, replace the nose piece with the supplied nose piece (black).

- 1 Remove the nose piece in an upward direction while grasping the nose piece support.
- 2 Insert ⑥ of the supplied nose piece (black) into the round notch ⑤.



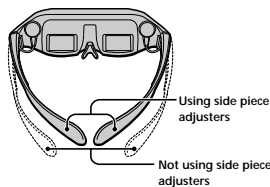
Confidential

PLM-A35E (AEP)

3 Adjust the width of the side pieces.

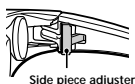
There are two settings for the side piece width adjustment.

If the fit seems loose, insert the side piece adjusters to the hinges of the left and right side pieces.

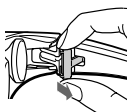


To use the side piece adjusters

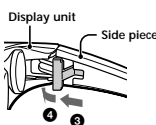
- 1 This is the original position. Normally keep adjusters here.



- 2 Turn the side pieces inside slightly then gently squeeze the top and bottom of the side piece adjuster and pull out to release.

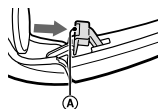


- 3 Slide the side piece adjuster toward the display unit.
- 4 Reinsert the side piece adjuster into the hinge area between the side piece and display unit. Repeat the procedure for the other side piece.



To reset the side piece adjusters, turn the side pieces inside slightly and reverse the above procedure.

To put the side piece adjuster back, press (A) to the illustrated direction until it "clicks" into place.



Getting Started

continued

13 GB

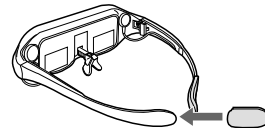
Wearing the Glasstron (continued)

For increased comfort while wearing Glasstron

If the Glasstron fit is loose or uncomfortable, place the supplied side piece pads onto the tip of each side piece.

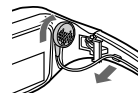
Note

Use the side piece pads pocket-side inward.



4 Wear the stereo earphones.

Detach the stereo earphones from the display unit and put them in your ears.



Notes

- If the stereo earphones are loose, we recommend using the spare ear-pads (not supplied).
- If your head is small, you may not be able to use the Glasstron.
- Depending on your eyesight, you may not be able to focus on the picture properly. In such a case, it is not a malfunction.

14 GB

Using the Glasstron

If you set the user lock, unlock it (page 19).

Before you start...

Be sure to follow the procedures in "Connecting the Glasstron" (pages 8 - 11) and "Wearing the Glasstron" (pages 12 - 14).

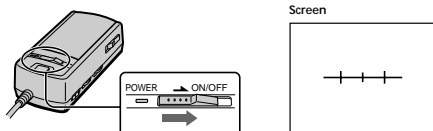
WARNING

Each time you use this product, adjustment screens will appear, requiring the viewer to properly fit the product. To prevent eye damage, do not use this product if the vertical lines do not cross the horizontal line on the next screen.

The Glasstron includes two small (left and right) LCDs. You are watching a combined picture created from these two screens. Although the screen position is properly aligned at the factory, it may become misaligned if the Glasstron is deformed or damaged. Check the screen position alignment every time you turn on the Glasstron. If you cannot have correct screen alignment, stop using the Glasstron immediately.

1 Turn on the Glasstron using the POWER ON/OFF switch.

The POWER lamp lights up.



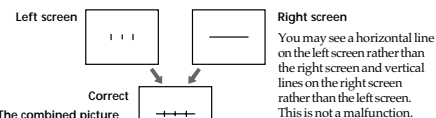
Operations

continued

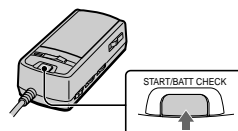
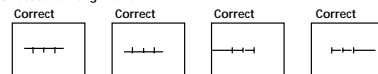
15 GB

Using the Glasstron (continued)

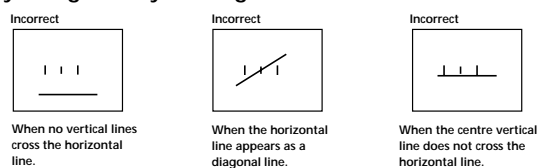
2 If the screens are aligned, press the START/BATT CHECK button.



If the image you see matches one of the pictures below, you have correct screen alignment.



If the image you see matches one of the pictures below, stop using the Glasstron immediately. Use of the Glasstron under such conditions may cause eye fatigue or eye damage.



When no vertical lines cross the horizontal line.

When the horizontal line appears as a diagonal line.

When the centre vertical line does not cross the horizontal line.

If you cannot see a proper arrangement of these lines even after resting your eyes for a few hours, the Glasstron may not be operating correctly. Contact your Sony dealer or local authorized Sony service facility.

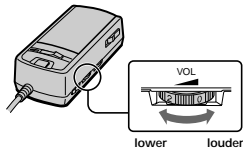
16 GB

Confidential

PLM-A35E (AEP)

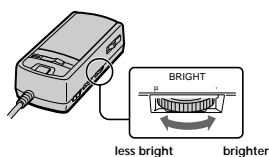
3 Start playback on the video equipment connected to the Glasstron.

4 Adjust the volume by turning the VOL control.
When you set the AVLS ON/OFF switch to ON, you cannot turn up the volume beyond the defined limit (see page 18).



5 Check that the four corners of the screen are clear.
If the four corners of the screen are not clear, do the step 2 (page 16) to check the screen position alignment again.

6 Adjust the brightness by turning the BRIGHT control.



Operations

continued

17-GB

Using the Glasstron (continued)

After you finish using the Glasstron

Take off the Glasstron, and turn off the power.

Note on the LCDs

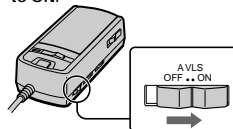
The LCD screen is made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is not a malfunction. (Effective dots: more than 99.99%)

Preventing sound from escaping through the stereo headphones

— AVLS (Auto Volume Limiter System):

Keeps down the maximum volume to protect your ear. You cannot turn up the volume beyond the defined limit even if you try to turn it up.

Set the AVLS ON/OFF switch to ON.



To turn the AVLS off

Set the AVLS ON/OFF switch to OFF.

Screen warnings against overuse of the Glasstron

To prevent eye fatigue or eye damage, after you use the Glasstron for three hours the following caution appears on the screen and the power turns off automatically.

TIME OUT
ZEIT ZU ENDE
TEMPS DEPASS

Caution: Motion sickness from viewing programmes.

Some viewers may experience motion sickness, headache or nausea from viewing movies or video programmes, especially those with intense action and movement. If you feel any of these symptoms, stop using the product immediately. To avoid personal injury or injury to others, do not drive a car or motorcycle, nor do anything that requires concentration until the symptoms disappear.

Caution: Motion sickness from external motion.

Do not use the product while subject to external motion — for example, as a passenger in a car. Use of this product under these conditions may cause motion sickness.

Setting the user lock

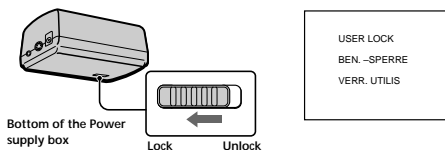
WARNING

This product should not be used by children age 15 or younger. The eyes of children are still developing and may be adversely affected by use of this product. To prevent such use, this product is equipped with the user lock system.

When the user lock is on, audio and video signals are not input and all operations except power on/off are disabled.

To use the Glasstron, unlock the user lock.

Set the user lock switch as shown in the illustration.



Operations

To unlock the user lock

Set the user lock switch to the opposite position.

Using an optional battery pack

If you use a battery pack such as the NP-F550 / F750 / F950, you can use the Glasstron without connecting to mains.

Charge the battery pack before use by using the optional battery charger, BC-V615. You cannot charge the battery pack while it is on the unit.

1 Slide the BATT/COVER RELEASE button to remove the cover.

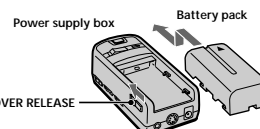
When not using the unit, keep the cover on the power supply box.



2 Attach the battery pack to the power supply box.

Install the battery pack properly making sure it is not crooked against the power supply box.

To remove the battery pack, slide and hold the BATT/COVER RELEASE button and pull the battery pack off.



Battery pack	Battery life
NP-F550	Approx. 7 hours

* The above indications are for fully charged batteries.

* Actual battery life depends on conditions of use.

* You can also use a battery pack such as the NP-F530 / F730 / F750 / F930 / F950 (not supplied) with the Glasstron.

* You can use an "InfoLITHIUM" battery pack with the Glasstron. When using such a battery pack, the estimated remaining battery life is displayed with the indicator instead of the time counter.

Notes

- While using the battery pack, if you connect or disconnect the AC power adaptor, the power turns off. To turn the power on, press the POWER ON/OFF switch again.
- If the POWER lamp flashes while using the battery pack, replace the battery pack with a fresh one.
- Battery life may be shorter in a cold environment. This is a typical battery characteristic.

"InfoLITHIUM" is a trademark of Sony Corporation.

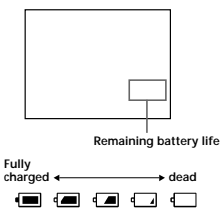
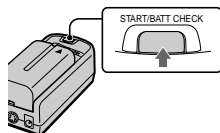
Confidential

PLM-A35E (AEP)

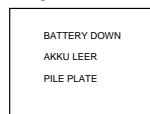
Checking the remaining battery life

When no indication or caution appears on the screen, press the **START/BATT CHECK** button.

The remaining battery life appears and the picture disappears.



When the battery pack is weak, the following message appears on the screen. Replace the battery pack with a charged one.



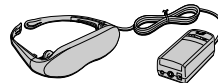
When using the AC power adaptor, the " " mark appears on the screen.

Operations

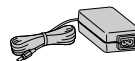
Checking the supplied accessories

Check that the following accessories are supplied with your Glasstron. If any item is not supplied, contact your Sony dealer or local authorized Sony service facility.

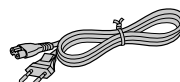
- Display unit/Power supply box (1)



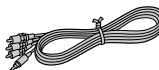
- AC power adaptor AC-PLM2 (1)



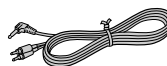
- Mains lead (1)



- Audio/video cable (special miniplug ↔ phono plug) (1)



- Audio/video cable (special miniplug ↔ stereo miniplug) (1)



- Plug adaptors (phono jack ↔ phono jack) (3)



- Nose piece (black) (1)



- Side piece pads (2)



- Operating instructions manual (1)

- Safety Instructions (1)

- Warranty (1)

21^{GB}

6^{GB}

Precautions

Use

- Operate the product only with the supplied AC power adaptor (AC-PLM2). If you use a different AC power adaptor, it may cause a malfunction.



Unified polarity plug

- Should any liquid or solid object fall into the cabinet, unplug the product and have it checked by qualified personnel before operating it further.
- Always turn the product off when you do not use it.
- Unplug the product from the mains if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Do not overload mains, extension cords, or convenience receptacles beyond their capacity, since this can result in fire or electric shock.
- Do not use attachments not recommended by the manufacturer, as they may cause hazards.
- Avoid using earphones at high volume. Hearing experts advise against continuous, loud, and extended play. If you experience a ringing in your ears, reduce volume or discontinue use.
- Do not touch the AC power adaptor or power supply box with wet hands. If you fail to observe this, it may cause electric shock.
- Do not drop or give a mechanical shock to the product.

Installation

- To prevent internal heat buildup, do not block the ventilation openings.
- Avoid operating the product at temperatures below 5°C (41°F).
- Do not subject the product to high temperature or direct sunlight. If you do not observe the above instructions, the product may become deformed and the screens may become impossible to align. If you keep watching misaligned screens, you may develop eye fatigue. Follow the instructions in "Using the Glasstron" (pages 15 - 18), to be sure the screens are aligned. If you find the screens misaligned, have the product repaired at your Sony dealer or local authorized Sony service facility.
- Do not place the product in locations where it is wet, humid, dusty, smoky, or steamy. Do not use this product near or around water. It may cause fire or electric shock. Especially, do not use the product in the bathroom.
- If the product is transported directly from a cold to a warm location, or if the room temperature has changed suddenly, the picture may be blurred or show poor colour. This is because moisture has condensed on the lenses inside. If this happens, let the moisture evaporate before using the product.
- Do not place the product on an unstable cart, stand, table, or shelf. The product may fall, causing serious injury to a child or an adult, and serious damage to the product.
- Do not allow anything to rest on or roll over the power cord, and do not place the product where the power cord is subject to wear or abuse.

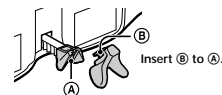
Others

- Unplug the product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power cord or plug is damaged or frayed.
 - If liquid has been spilled into the product.

- If the product has been exposed to rain or water.
- If the product has been subject to excessive shock by being dropped, or the cabinet has been damaged.
- If the product does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- When the product exhibits a distinct change in performance — this indicates a need for service.
- Do not disassemble or modify the product. It may cause fire or electric shock. Have the product checked and repaired at your Sony dealer or local authorized Sony service facility.
- Do not attempt to service the product yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- Upon completion of any service or repairs to the product, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the product is in safe operating condition, and to so certify.
- Unplug the product from the mains before cleaning. Clean the product gently with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene.

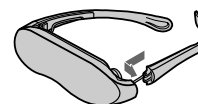
If the nose piece is disconnected

Reinsert the nose piece to its position.



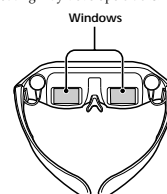
If the side pieces are disconnected

You can reattach the side piece. Insert the side piece to the inner side of the display unit. Gently push until it clicks into position. However, reattaching the side pieces may cause a malfunction. Be careful not to reattach them too often.



Window coating

To avoid reflection, the windows are coated. Do not place the product in locations subject to sudden temperature changes, or where it is excessively hot (above 60°C/96°F). For example, inside a car parked in direct sunlight. The coating may develop cracks.



Additional Information

22^{GB}

23^{GB}

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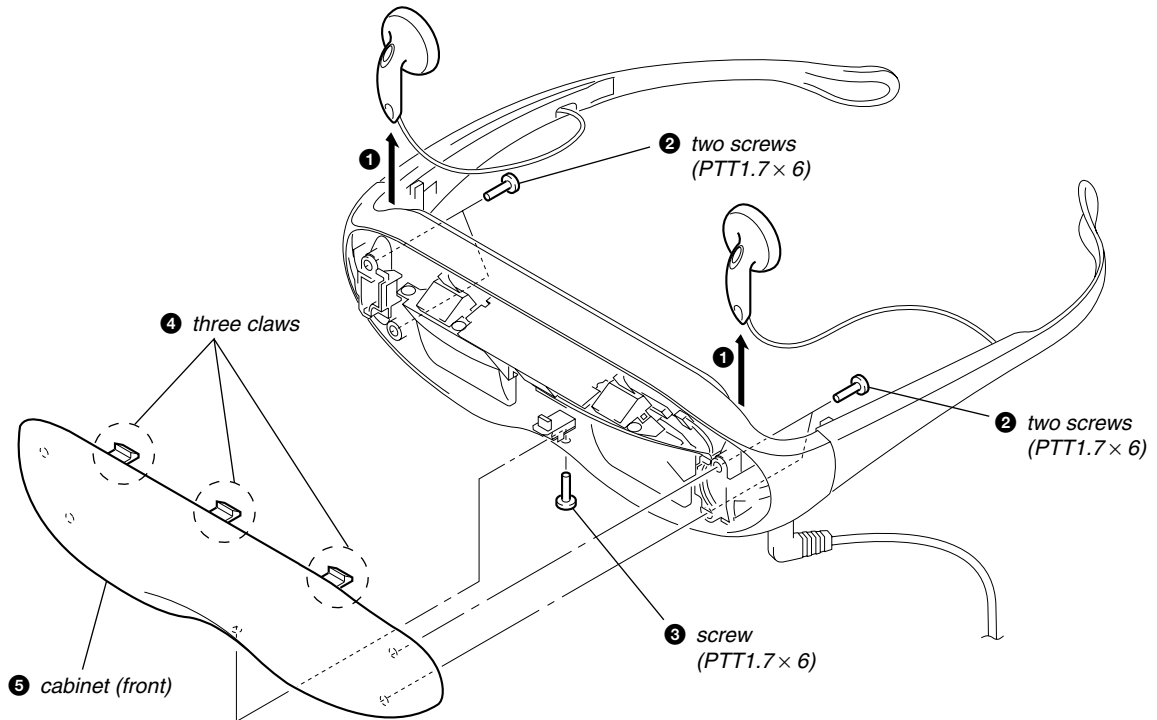
PLM-A35E (AEP)

MEMO

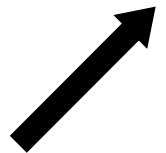
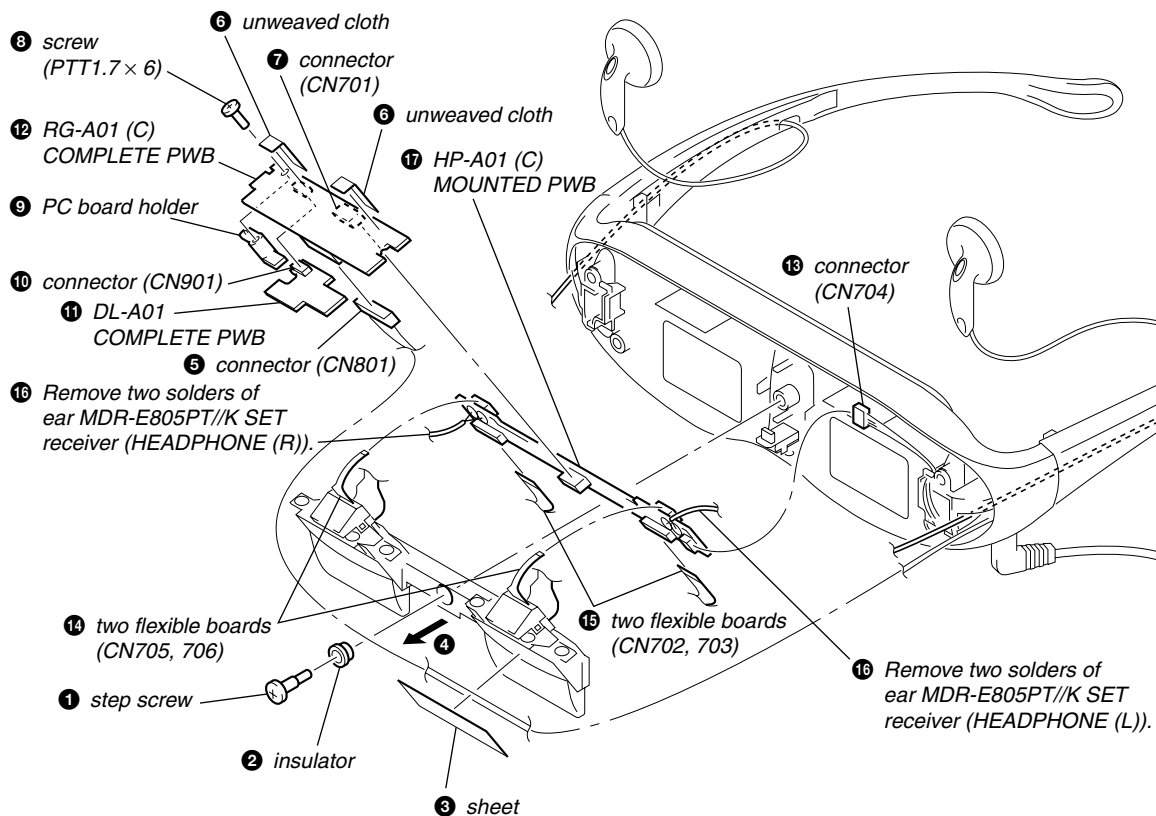
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

CABINET (FRONT)

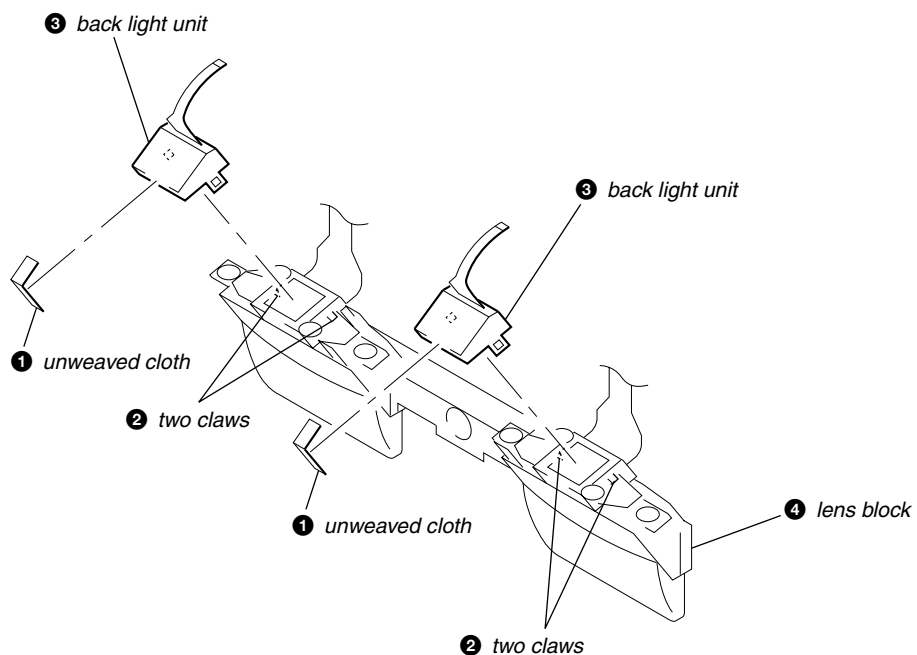


RG-A01 (C) COMPLETE PWB, HP-A01 (C) MOUNTED PWB, DL-A01 COMPLETE PWB

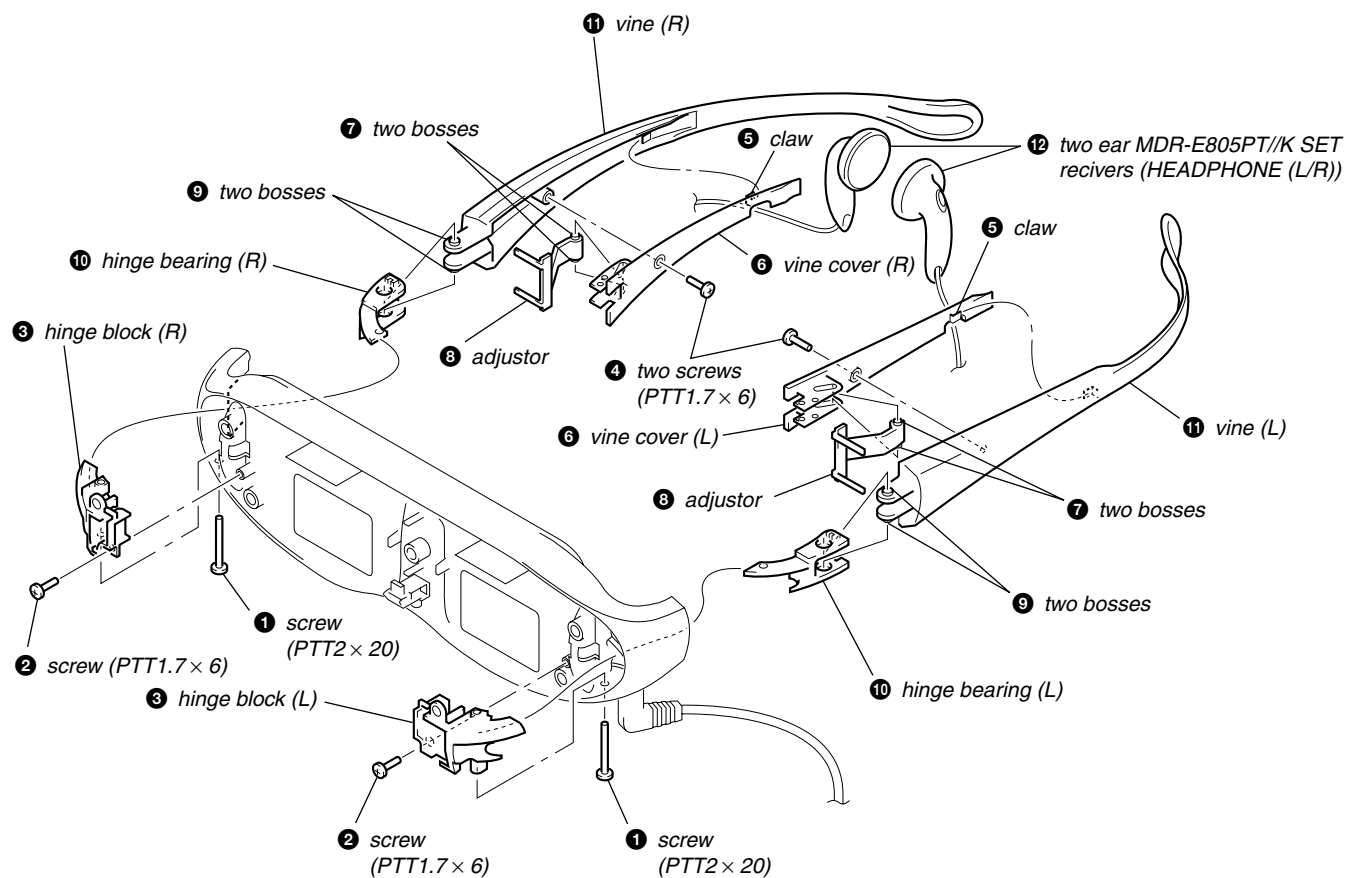


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BACK LIGHT UNIT



EAR MDR-E805PT//K SET RECIVER (HP701, 702)



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PLM-A35E (AEP)

2-2
(END)

SECTION 3 ELECTRICAL ADJUSTMENTS

Precautions on adjustment:

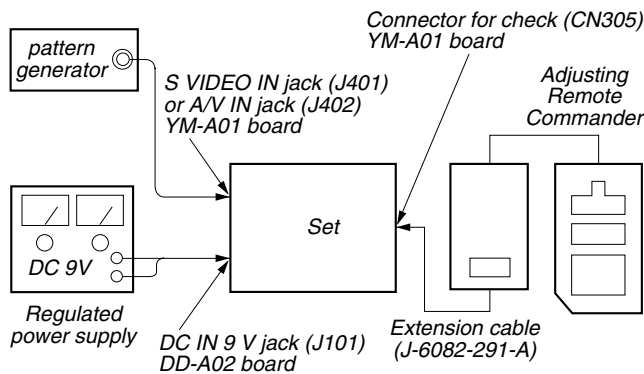
1. Perform the adjustment in the given order.
2. Power supply voltage: DC 9 V
3. Equipment required
Electrical adjustment requires the following measuring equipment.
 - (1) Oscilloscope: 2 phenomena, band 30 MHz or more, with delay mode (use 10 : 1 probe unless otherwise specified)
 - (2) Pattern generator
 - (3) Regulated power supply
 - (4) Digital voltmeter
 - (5) Frequency counter
 - (6) Connector for adjustment
4. Measurement points for adjustment are located at CN803 on the RG-A01 board. The pin No. and signal name of CN803 is listed below.

• RG-A01 Board, CN803

Pin No.	Signal Name	Pin No.	Signal Name
1	GND	6	HD
2	G OUT	7	NC
3	B OUT	8	NC
4	R OUT	9	NC
5	GND	10	NC

Preparation:

Connect electrical blocks as shown below.



Note: In the adjustment where the S VIDEO input is designated, if adjustment was made with the VIDEO input. The specification of this set will not be satisfied. Always follow the designation. If adjustment was made using the VTR with S VIDEO OUT terminal as a signal source, the performance of this set depends on that VTR. Therefore, use the pattern generator with the Y/C separate output terminals, if possible.

5. Setting up Input Signals

(1) S VIDEO Signal

Connect an oscilloscope to the Y signal pin of the S VIDEO IN connector, and check that the sync signal of Y signal is approximately 0.3 V, video amplitude is approximately 0.7 V, and the setup level is 0 V. (If using the VTR with S VIDEO OUT terminal, check further that the chroma signal and burst signal do not remain.)

Also, connect an oscilloscope to the chroma signal pin of the S VIDEO IN connector, and check that the burst signal amplitude of chroma signal is approximately 0.3 V and it is flat, and moreover, the amplitude ratio of burst signal to "red" signal is 0.30 : 0.66.

Setup level: Potential difference between black and pedestal

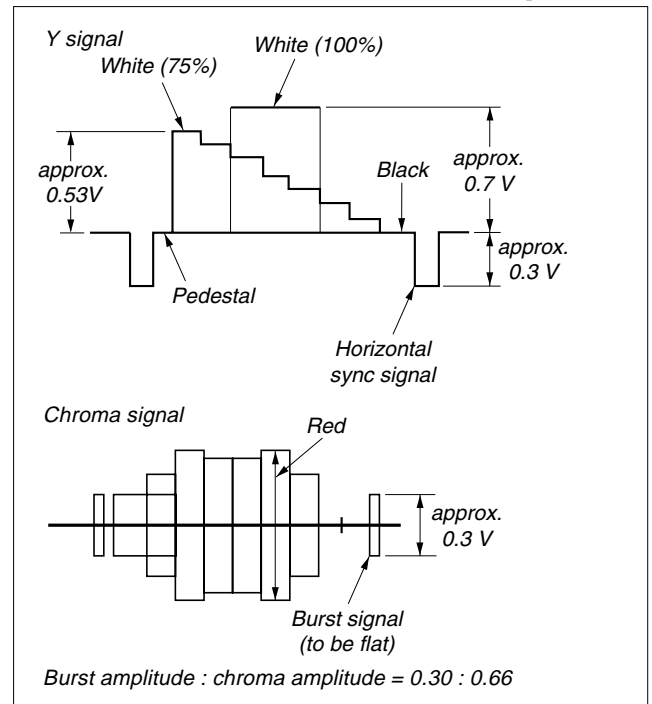


Fig. 3-1. Pattern generator's color bar signals

(2) VIDEO Signal

In adjusting this set, video signals obtained from the pattern generator are used, and therefore these video output signals must satisfy the specification. Connect the oscilloscope to the VIDEO IN terminal, and confirm that the sync signal amplitude of video signals is approximately 0.3 V, the amplitude of video part is approximately 0.7 V, burst signal amplitude is approximately 0.3 V and flat, and the level ratio of burst signal to "red" signal is 0.30 : 0.66.

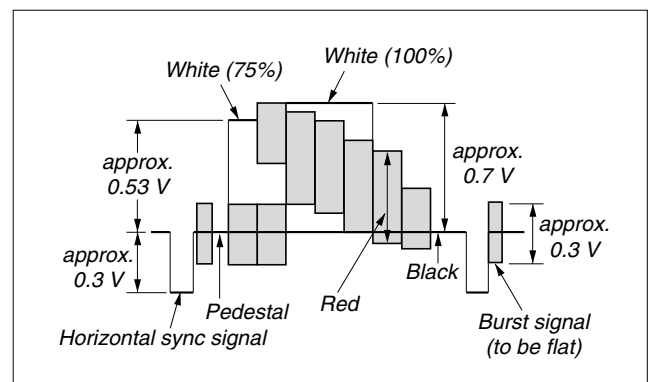


Fig. 3-2. Pattern generator's color bar signals

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[Preparation for Adjustment]

1. Service Jigs

(1) Adjusting remote commander (RM-95-modified)

Note: J-6082-053-B

(2) Extension cable (for remote commander plug converter) J-6082-291-A

Note: The page will not be changed over, unless the microprocessor in the adjusting remote commander is a new one (uPD7503-G-C56-12). In such a case, replace with new microprocessor (8-759-148-35).

2. Adjusting Remote Commander

For the adjustment, the adjustment data saved in the nonvolatile memory (EEPROM) must be rewritten, and for this purpose the adjusting remote commander is used.

The adjusting remote commander makes two-way communication with the set using a remote control signal line (LANC). The adjusting remote commander transmits pages, addresses, and data up/down commands to the set. The set transmits pages, addresses, and data to the adjusting remote commander.

3. How to Use The Adjusting Remote Commander

(1) Connect the adjusting remote commander to the CN305 on YM-A01 board via extension cable (J-6082-291-A).

(At this time, set the switch of extension cable to OFF)
(OPEN) position

Turn ON the power on the set.

(2) Set the HOLD switch on the adjusting remote commander to the HOLD (SERVICE) position.

If connection is normal, the LCD display on the adjusting remote commander will be as shown in Fig.3-3.

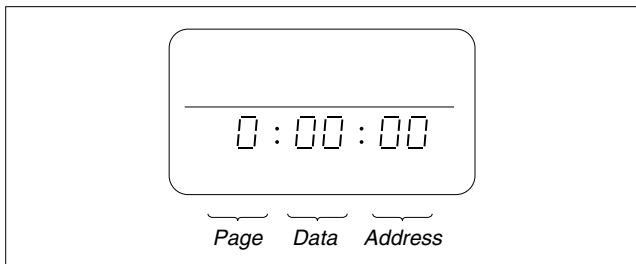


Fig. 3-3

(3) Operate the adjusting remote commander as follows:

• Page change

Press the EDIT SEARCH + button to increase the page.

Press the EDIT SEARCH - button to decrease the page.

There are 16 pages from 0 to F.

Hexadecimal numbers	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
LCD display	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal conversion	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

• Address change

Press the FF (▶▶) button to increase the address.

Press the REW (◀◀) button to decrease the address.

There are 256 addresses from 00 to FF.

• Data change (data setting)

Press the PLAY (▶) button to increase the data.

Press the STOP (■) button to decrease the data.

There are 256 data from 00 to FF.

• Adjustment data writing

The PAUSE button must be pressed to write adjustment data (D page) to the nonvolatile memory (EEPROM). (Unless the PAUSE is pressed, new data are not saved in the nonvolatile memory.)

(4) Select page: 1, address: 00, and set 01 data. Thus, the data input to page: D is enabled.

(5) After the adjustment finished, select page: 1, address: 00, and set 00 data. Thus, the data change on page: D is disabled.

(6) After all adjustments finished, turn OFF the main power supply (9 V) once.

4. Precaution on Use of The Adjusting Remote Commander

Misoperation of the adjusting remote commander could erase correct data. To prevent this, it is recommended to make a note of data from page: D before adjustment, and also to make a note of new adjustment data each time the adjustment of one item is finished.

Adjusting Remote Commander RM-95 (J-6082-053-B)

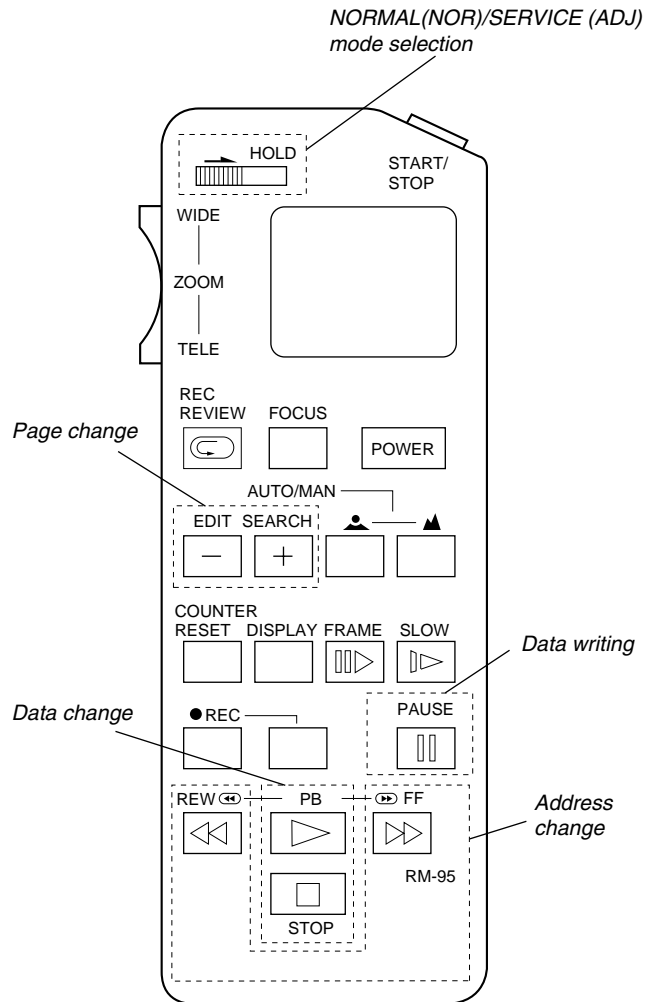


Fig. 3-4

5. Data Processing

Certain adjustment items require the microprocessor data to be read out or the displayed data (hexadecimal numbers) on jigs or adjusting remote commander to be calculated to get adjustment data. In such a case, convert hexadecimal numbers into decimal numbers once, then make calculation, and convert its result into hexadecimal number as adjustment data. Table 3-1 shows hexadecimal – decimal number conversion.

Hexadecimal – Decimal number conversion.

Higher digit of hex.	Lower digit of hex.															
	0	1	2	3	4	5	6	7	8	9	A (<i>A</i>)	B (<i>b</i>)	C (<i>c</i>)	D (<i>d</i>)	E (<i>E</i>)	F (<i>F</i>)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (<i>A</i>)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
B (<i>b</i>)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (<i>c</i>)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (<i>d</i>)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (<i>E</i>)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (<i>F</i>)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Table 3-1

Note: Data in () are displayed on jig or adjusting remote commander.

Example: If display on jig or adjusting remote commander is BD (*b d*)

As higher digit of hex. number is B (*b*) and lower digit is D (*d*), the intersection “189” of ① and ② in Table 1 is the target decimal number.

6. Power ON Procedure for Adjustment

- (1) Connect an extension cable to the adjusting remote commander.
- (2) After making sure that the HOLD switch on the adjusting remote commander is not turned on (not at left (NOR) position), supply 9 Vdc to the DC IN (J101).
(With the HOLD switch at HOLD position, the initial operation of the set does not finish, disabling the POWER switch function)
- (3) Turn ON the POWER switch on the set. Confirm that a green LED lights up.
- (4) Set the HOLD switch on the adjusting remote commander to the HOLD (right (ADJ)) position.

7. Adjustment Finishing Procedure

Order	Page	Address	Data	Description	Remarks
1.	D	01 – 31		Check if adjusted data are written correctly to the given page and address.	
2.	2	00	00	Set data 00 to given page and address.	Page 2: Reset
3.	1	00	00		Page D: Write protect
4.	Set HOLD switch on adj. remote commander to NOR position.				

8. Check screen skip mode setting

Order	Page	Address	Data	Description	Remarks
1.	2	00	01	Set data 01 to given page and address.	Select RAM address page 1
2.	2	2C	00	Set data 00 to given page and address.	No output check screen

Resetting: Turn the POWER switch off.

9. Picture control standard setting (LCD and OPTICS blocks adjustments)

Order	Page	Address	Data	Description	Remarks
1.	1	00	01	Set data 01 to given page and address.	Page D: Cancel protect
2.	D	01	41	Set data 41 to given page and address, and press PAUSE.	Ope. – Brightness: Center

After LCD and OPTICS blocks adjustments

Order	Page	Address	Data	Description	Remarks
1.	1	00	01	Set data 01 to given page and address.	Page D: Cancel protect
2.	D	01	01	Set data 01 to given page and address, and press PAUSE.	Ope. – Brightness: Reset center

[Preset Data Writing]

Connection:

- (1) Connect the adjusting remote commander to the CN305 on YM-A01 board.

Data Writing Procedure

- (1) Set data: 01 to page: 1, address: 00.
- (2) Enter the data given in the table below.

Note: To write the data to the EEPROM, press the PAUSE button on the adjusting remote commander each time the data is set.

- (3) After writing all data, set data: 00 to page: 1, address: 00.

D Page Adjustment Address and Initial Value

Data in () in Initial set column are different from the data adjusted at the shipment.

Make setting and adjustment only when IC302 (EEPROM) was replaced.

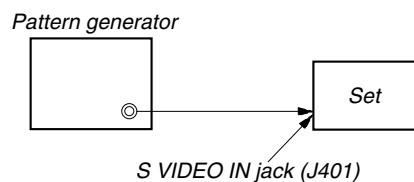
Data in Memo column are fixed value. Always set to this value.

Address	Data		Remarks
	Initial set	Memo	
00	–	–	Not used
01	01	(01)	LCD, OPTICS blocks adj. (Set data: 41 during adj.)
02	00	00	Fixed value
03	00	00	
04	(7D)		Battery down adj.
05	(78)		
06	(75)		
07	(67)		
08	(60)		
09	(08)		Fixed value
0A	4A	4A	
0B	03	03	
0C	40	40	
0D	00	00	
0E	40	40	
0F	0B	0B	
10	00	00	Fixed value
11	74	74	
12	(80)		Color adj.
13	(A0)		G brightness adj.
14	(1A)		G contrast adj.
15	(80)		R brightness, white adj.
16	(80)		B brightness, white adj.
17	A2	A2	Fixed value
18	CE	CE	
19	80	80	R contrast adj.
1A	(80)		
1B	(80)		B contrast adj.
1C	6D	6D	Fixed value
1D	0A	0A	
1E	80	80	
1F	(80)		TG PLL adj.
20	03	03	Fixed value
21	00	00	
22	00	00	
23	00	00	
24	00	00	
25	00	00	
26	0D	0D	

Address	Data		Remarks
	Initial set	Memo	
27	0D	0D	Fixed value
28	(A0)		V. COM R adj.
29	(A0)		V. COM L adj.
2A	(C0)		BL balance adj.
2B	(C0)		
2C	00	00	Fixed value
2D	00	00	
2E	00	00	
2F	00	00	
30	(FF)		Brightness vol. center adj.
31	23	23	Fixed value
32-FF	–	–	Not used

LCD BLOCK

- To adjust the LCD block, connect a pattern generator as shown below. (For details, see page 3-1)



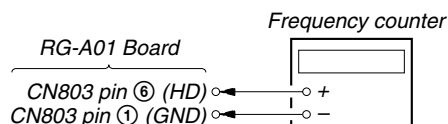
- Set the picture control standard. (See page 3-4)
- Make the following adjustment in the given order.

[TG PLL Adjustment]

Condition:

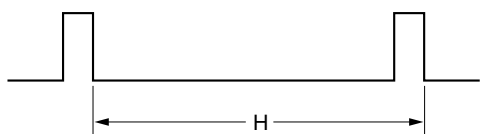
Input signal	No signal
Measurement point	RG-A01 board CN803 pin ⑥
Measuring equipment	Frequency Counter
Adjustment page	D
Adjustment address	1F
Specified value	15.625 kHz \pm 20 Hz

Connection:



Adjustment Procedure:

- Connect a frequency counter to the CN803 pin ⑥ (HD) and pin ① (GND) on RG-A01 board.
- Set (or confirm) data: 01 to page: 1, address: 00. (Cancel D page protect)
- On page: D, address: 1F, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the frequency counter reading satisfies the specified value.



Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[Brightness Volume Center Adjustment]

Preparation:

BRIGHT control (RV301): Center (click position)

Condition:

Input signal	Color bar signal (white 75%)
Measurement point	Displayed data on the adjusting remote commander
Measuring equipment	
Adjustment page	D
Adjustment address	30
Specified value	XXh = 80h \pm 09h

Adjustment Procedure:

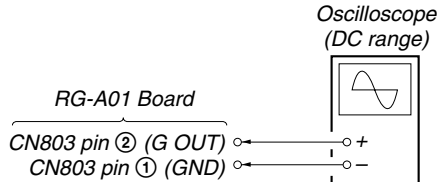
- Set data: 01 to page: 2, address: 00.
- Read data: XXh on page: 2, address: 2A.
- Confirm that the data: XXh satisfies the specified value.
- Set (or confirm) data: 01 to page: 1, address: 00. (Cancel D page protect)
- Enter the data: XXh to page: D, address: 30.
- Press the PAUSE button to write data.

[G Contrast Adjustment]

Condition:

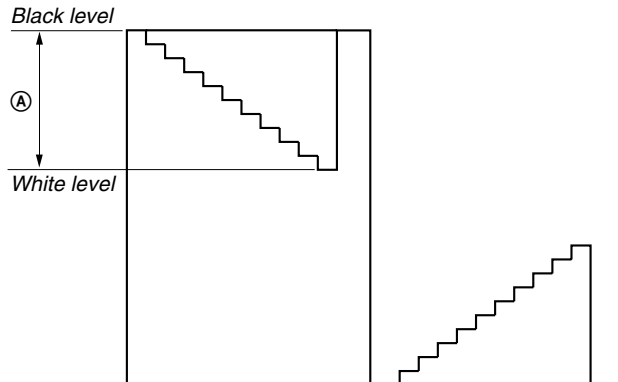
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ②
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	14
Specified value	2.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ② (G OUT) and pin ① (GND) on the RG-A01 board.
- (2) Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- (3) On page: D, address: 14, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ① level of waveform on the oscilloscope satisfies the specified value.



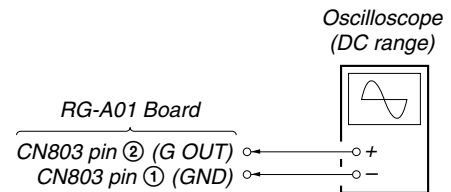
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[G Brightness Adjustment]

Condition:

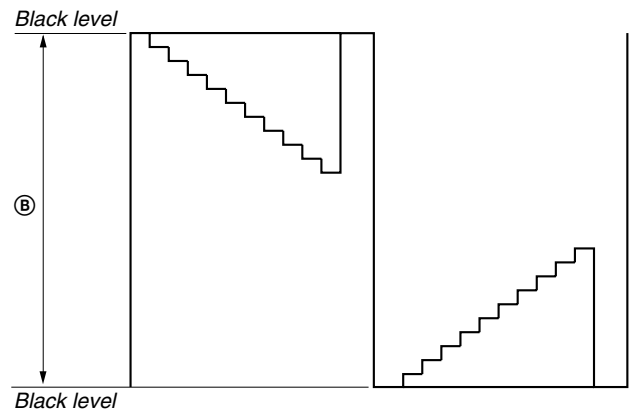
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ②
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	13
Specified value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ② (G OUT) and pin ① (GND) on the RG-A01 board.
- (2) Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- (3) On page: D, address: 13, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ② level of waveform on the oscilloscope satisfies the specified value.



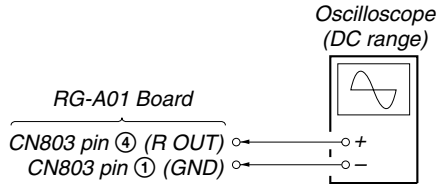
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[R Contrast Adjustment]

Condition:

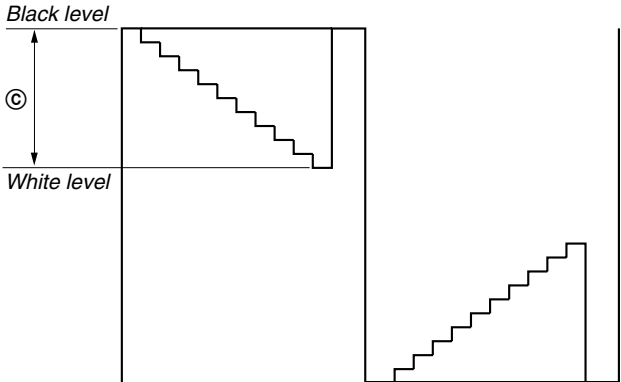
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ④
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	1A
Specified value	2.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- Connect an oscilloscope to the CN803 pin ④ (R OUT) and pin ① (GND) on the RG-A01 board.
- Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- On page: D, address: 1A, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ㉟ level of waveform on the oscilloscope satisfies the specified value.



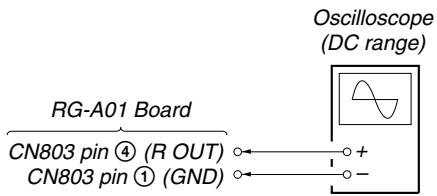
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[R Brightness Adjustment]

Condition:

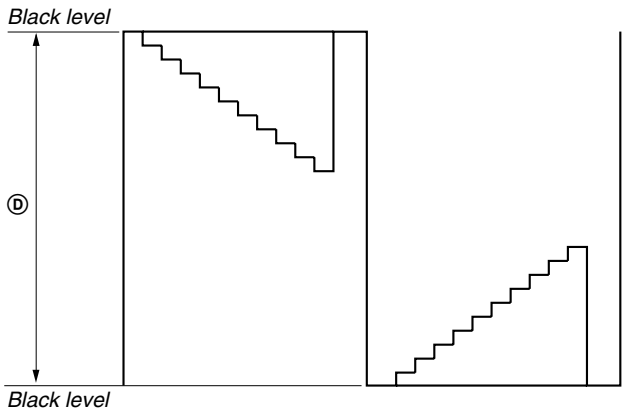
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ④
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	15
Specified value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- Connect an oscilloscope to the CN803 pin ④ (R OUT) and pin ① (GND) on the RG-A01 board.
- Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- On page: D, address: 15, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ㊸ level of waveform on the oscilloscope satisfies the specified value.



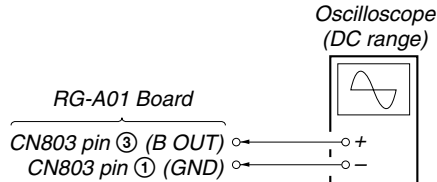
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[B Contrast Adjustment]

Condition:

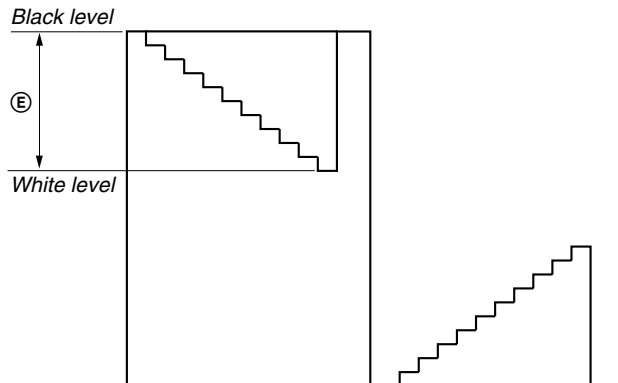
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ③
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	1B
Specified value	2.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ③ (B OUT) and pin ① (GND) on the RG-A01 board.
- (2) Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- (3) On page: D, address: 1B, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ㊦ level of waveform on the oscilloscope satisfies the specified value.



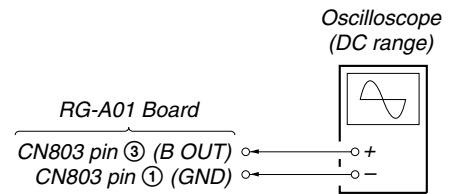
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[B Brightness Adjustment]

Condition:

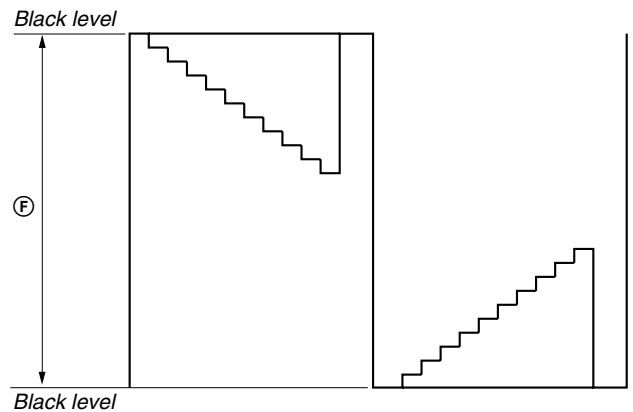
Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	RG-A01 board CN803 pin ③
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	16
Specified value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ③ (B OUT) and pin ① (GND) on the RG-A01 board.
- (2) Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- (3) On page: D, address: 16, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ㊦ level of waveform on the oscilloscope satisfies the specified value.



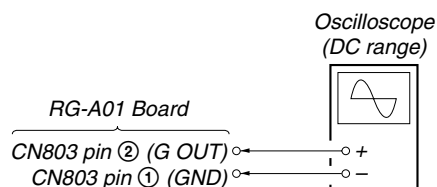
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[Color Adjustment]

Condition:

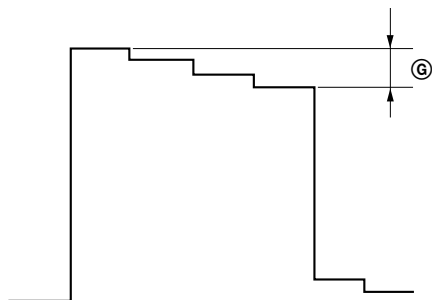
Input signal	Color bar signal (White: 75%)
Measurement point	RG-A01 board CN803 pin ②
Measuring equipment	Oscilloscope
Adjustment page	D
Adjustment address	12
Specified value	$0 \pm 0.05 \text{ Vp-p}$

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ② (G OUT) and pin ① (GND) on the RG-A01 board.
- (2) Set (or confirm) data: 01 to page: 1, address: 00. (Cancel D page protect)
- (3) On page: D, address: 12, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the ⑥ level of waveform on the oscilloscope satisfies the specified value.



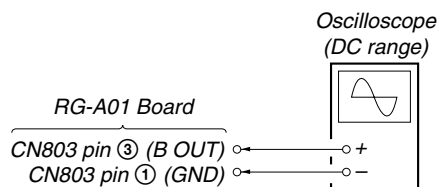
Adjustment and Connection Location: RG-A01 board
(see page 3-14)

[Burst Cleaning Level Adjustment]

Condition:

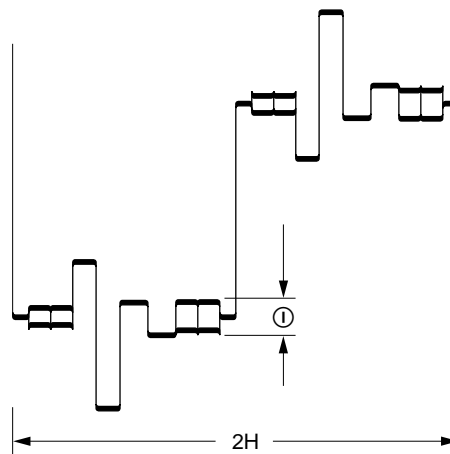
Input signal	Anti-pal signal (Anti-pal signal is included in special color-bar signal and so on.)
Measurement point	RG-A01 board CN803 pin ③
Measuring equipment	Oscilloscope
Adjustment part	RV911 (DL-A01 board)
Specified value	Less than 50 mV

Connection:



Adjustment Procedure:

- (1) Connect an oscilloscope to the CN803 pin ③ (B OUT) and pin ① (GND) on the RG-A01 board.
- (2) Adjust RV911 (DL-A01 board) so that the ① level (B-Y, - (B-Y) part) of waveform on the oscilloscope becomes the minimum and also satisfies the specified value.



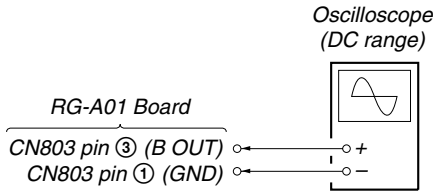
Adjustment and Connection Location: RG-A01 and DL-A01 boards
(see page 3-14)

[Burst Cleaning Phase Adjustment]

Condition:

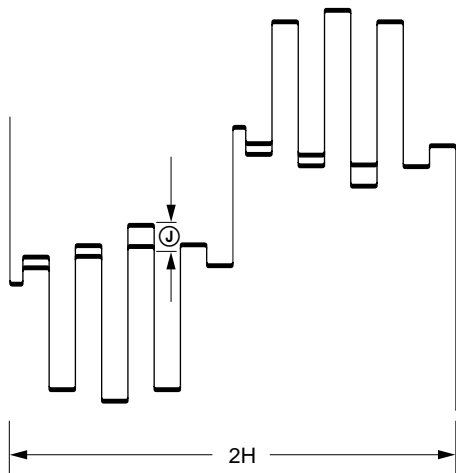
Input signal	Color bar signal
Measurement point	RG-A01 board CN803 pin ③
Measuring equipment	Oscilloscope
Adjustment part	CT911 (DL-A01 board)
Specified value	Less than 50 mV

Connection:



Adjustment Procedure:

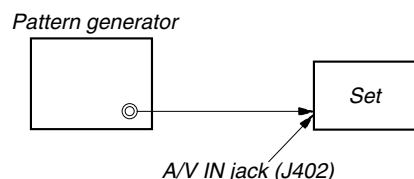
- (1) Connect an oscilloscope to the CN803 pin ③ (B OUT) and pin ① (GND) on the RG-A01 board.
- (2) Adjust CT911 (DL-A01 board) so that the ④ level of waveform on the oscilloscope becomes the minimum and also satisfies the specified value.



Adjustment and Connection Location: RG-A01 and DL-A01 boards (see page 3-14)

OPTICS BLOCK

- To adjust the optics block, connect a pattern generator as shown below. (For details, see page 3-1)



- Set the picture control standard. (See page 3-4)
- Make the following adjustment in the given order.

[V.COM R Adjustment]

- Make this adjustment through a visual check.

Note: Before this adjustment, the Contrast Adjustment must be finished.

Condition:

Input signal	Monoscope signal
Measurement point	Right LCD screen
Measuring equipment	Visual check
Adjustment page	D
Adjustment address	28

Adjustment Procedure:

- Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- On page: D, address: 28, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that horizontal streaks do not wobble on the display when looking into the right finder.

[V.COM L Adjustment]

- Make this adjustment through a visual check.

Note: Before this adjustment, the Contrast Adjustment must be finished.

Condition:

Input signal	Monoscope signal
Measurement point	Left LCD screen
Measuring equipment	Visual check
Adjustment page	D
Adjustment address	29

Adjustment Procedure:

- Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- On page: D, address: 29, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that horizontal streaks do not wobble on the display when looking into the left finder.

[LED Back Light Brightness Balance Adjustment]

- Make this adjustment through a visual check.

Condition:

Input signal	White: 100% signal
Measurement point	LCD screen
Measuring equipment	Visual check
Adjustment page	D
Adjustment address	2A (right) or 2B (left)

Adjustment Procedure:

- Set (or confirm) data: 01 to page: 1, address: 00.
- Page: D, address: 2A (right) or 2B (left)
Change the address data of higher brightness with the PLAY and STOP buttons and press the PAUSE button to write data so that the brightness becomes same as the lower LED back light brightness when looking into the left and right finders.

[White Balance Adjustment]

- Make this adjustment through a visual check.

Condition:

Input signal	10 step signal, 1 Vp-p (White: 100%)
Measurement point	LCD screen
Measuring equipment	Visual check
Adjustment page	D
Adjustment address	15, 16

Adjustment Procedure:

- Set (or confirm) data: 01 to page: 1, address: 00.
(Cancel D page protect)
- Page: D, address: 15, 16
Change data at these two addresses with the PLAY and STOP buttons and press the PAUSE button to write data so that the display achromatic gray gradation (not colored in blue or red) when looking into the left and right finders.

POWER SUPPLY BLOCK

[Battery Down Adjustment]

Preparation:

- **[VOL]** control (RV201) : Maximum
- **[AVLS]** switch (S201) : OFF
- **[BRIGHT]** control (RV301): Center (click position)

Condition:

Signal	VIDEO IN: Color bar AUDIO IN L: 1 kHz, -20 dBs AUDIO IN R: 1 kHz, -20 dBs
Measurement point	Displayed data on adj. remote commander
Measuring equipment	
Adjustment page	D
Adjustment address	04, 05, 06, 07, 08, 09
Specified value	ZZh = 60h ± 0Ah

Connection:

Referring to Fig. 3-5, connect the following equipment.

- (1) Connect the regulated power supply and a digital voltmeter to the battery terminal.
- (2) Connect the adjusting remote commander to the CN305 on YM-A01 board.
- (3) Connect a pattern generator to the VIDEO IN terminal.
- (4) Connect an audio SG to the AUDIO IN terminal.

Adjustment Procedure:

- (1) Adjust the output voltage of regulated power supply so that the battery terminal voltage is 6.07 ± 0.02 Vdc.
- (2) Turn ON the POWER switch on the set.
- (3) Set data: 01 to page: 2, address: 00.
- (4) Read data: ZZh on page: 2, address: 2B.
- (5) Confirm that the data: ZZh satisfies the specification value.
- (6) Set data: 01 to page: 1, address: 00.
(Cancel D page protect)
- (7) Using the following formulas (calculation of hexadecimal numbers), calculate the adjustment data and enter them to respective adjustment addresses.

(Refer to 5. Data Processing on page 3-3)

Address: 08	$D_{08} = ZZh$
Address: 07	$D_{07} = ZZh + 07h$
Address: 06	$D_{06} = ZZh + 15h$
Address: 05	$D_{05} = ZZh + 18h$
Address: 04	$D_{04} = ZZh + 1Dh$
Address: 09	$D_{09} = 08h$

Note: After setting each data, be sure to press the PAUSE button on the adjusting remote commander.

- (8) Set data: 00 to page: 2, address: 00.
- (9) Set data: 00 to page: 1, address: 00.
(D page protect)

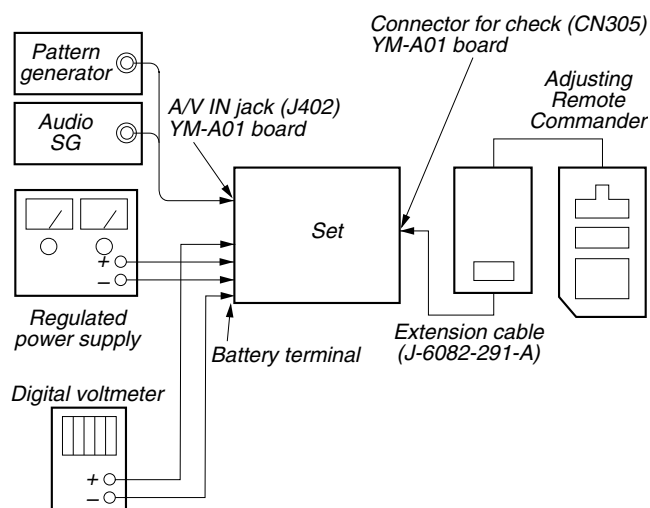
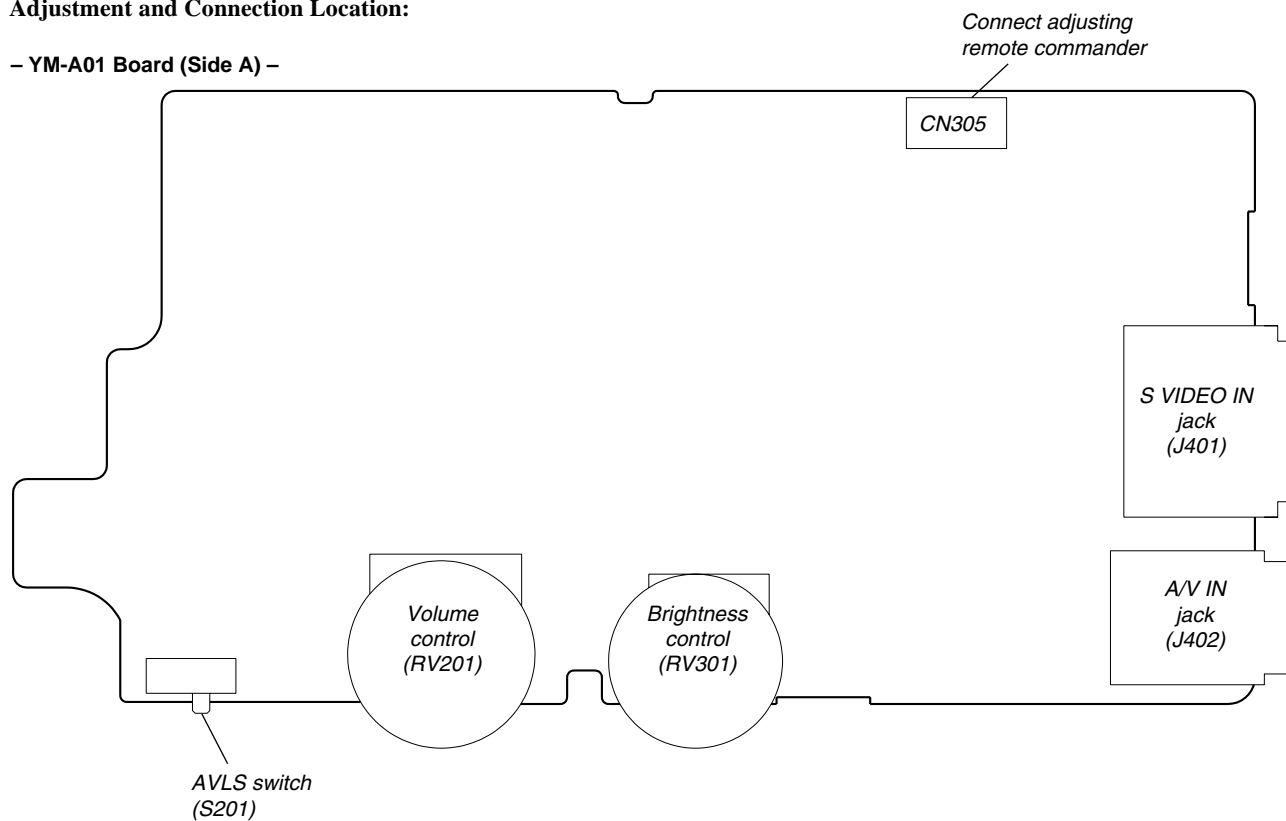


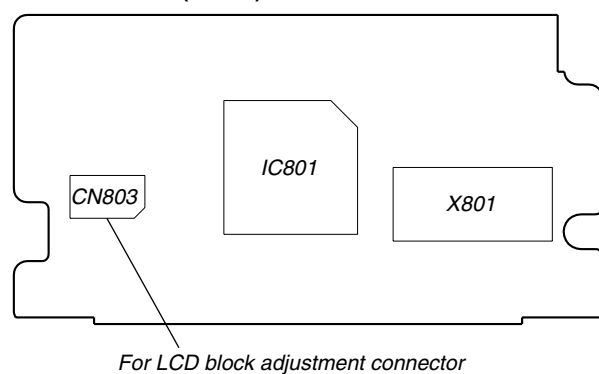
Fig. 3-5

Adjustment and Connection Location:

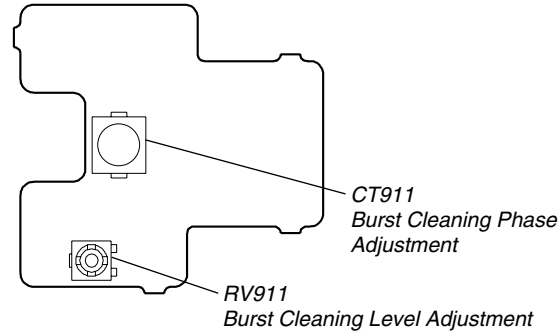
– YM-A01 Board (Side A) –



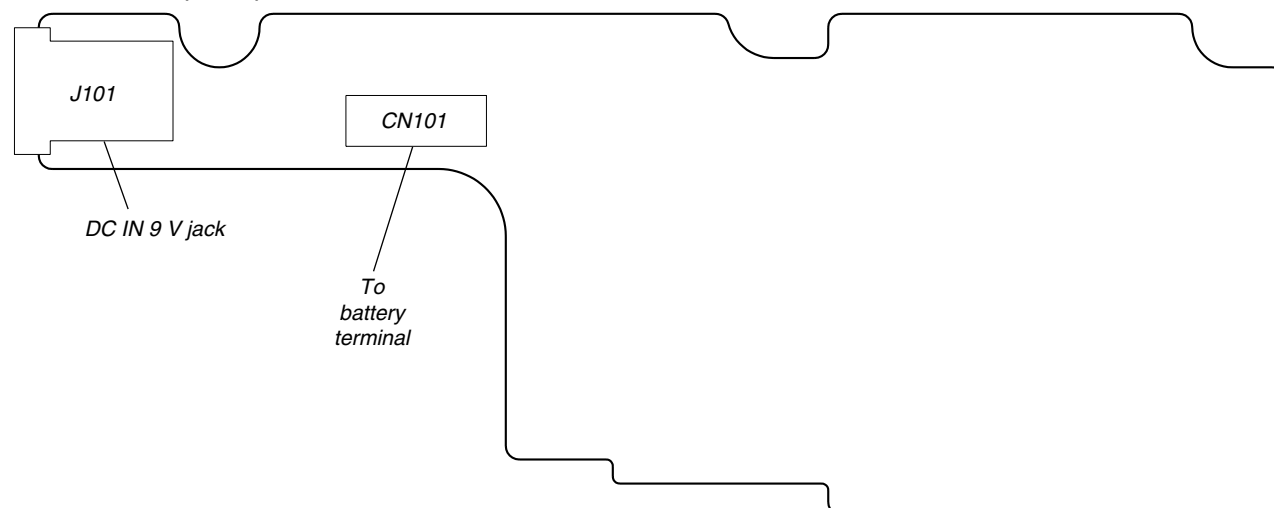
– RG-A01 Board (Side B) –



– DL-A01 Board (Side A) –



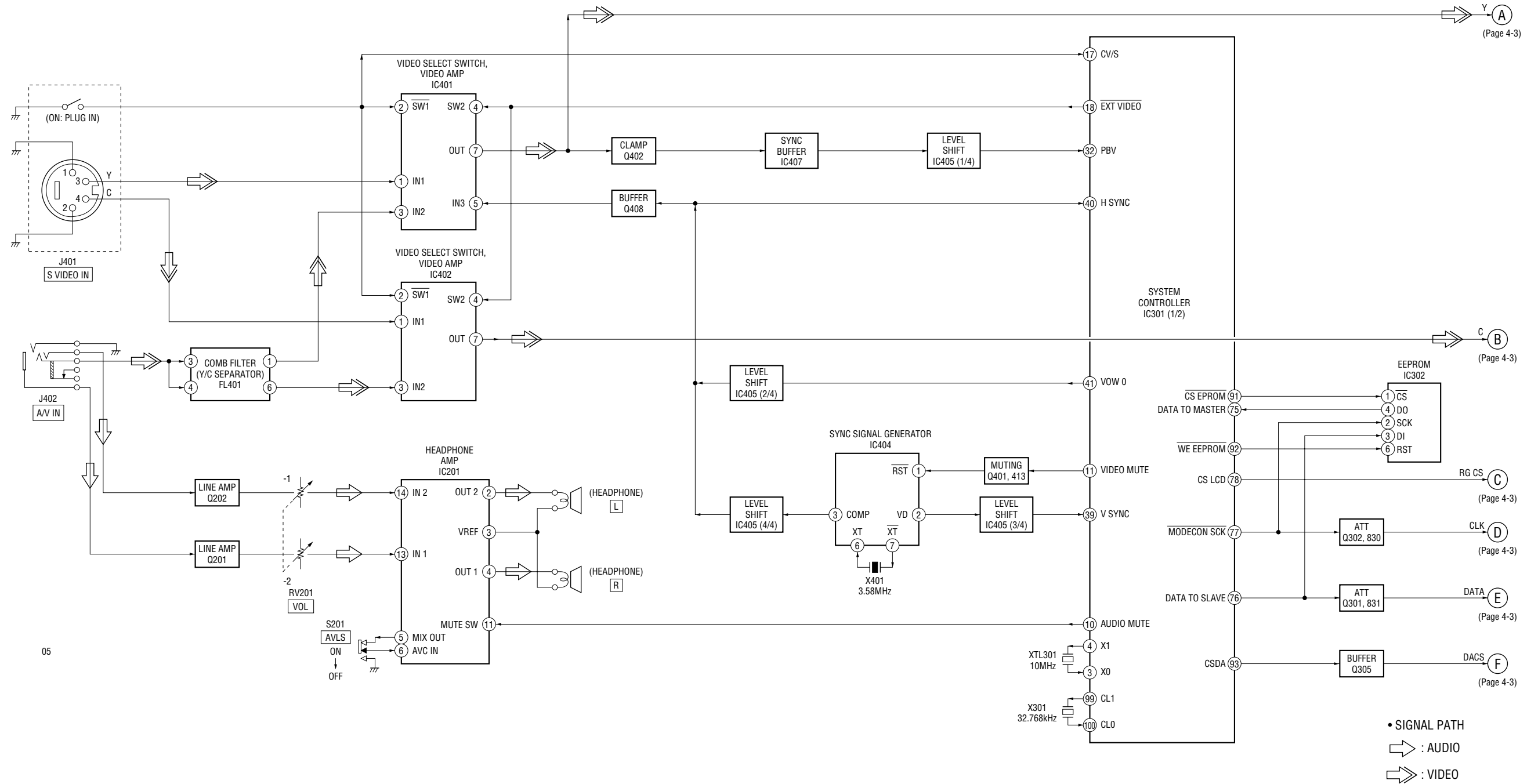
– DD-A02 Board (Side A) –



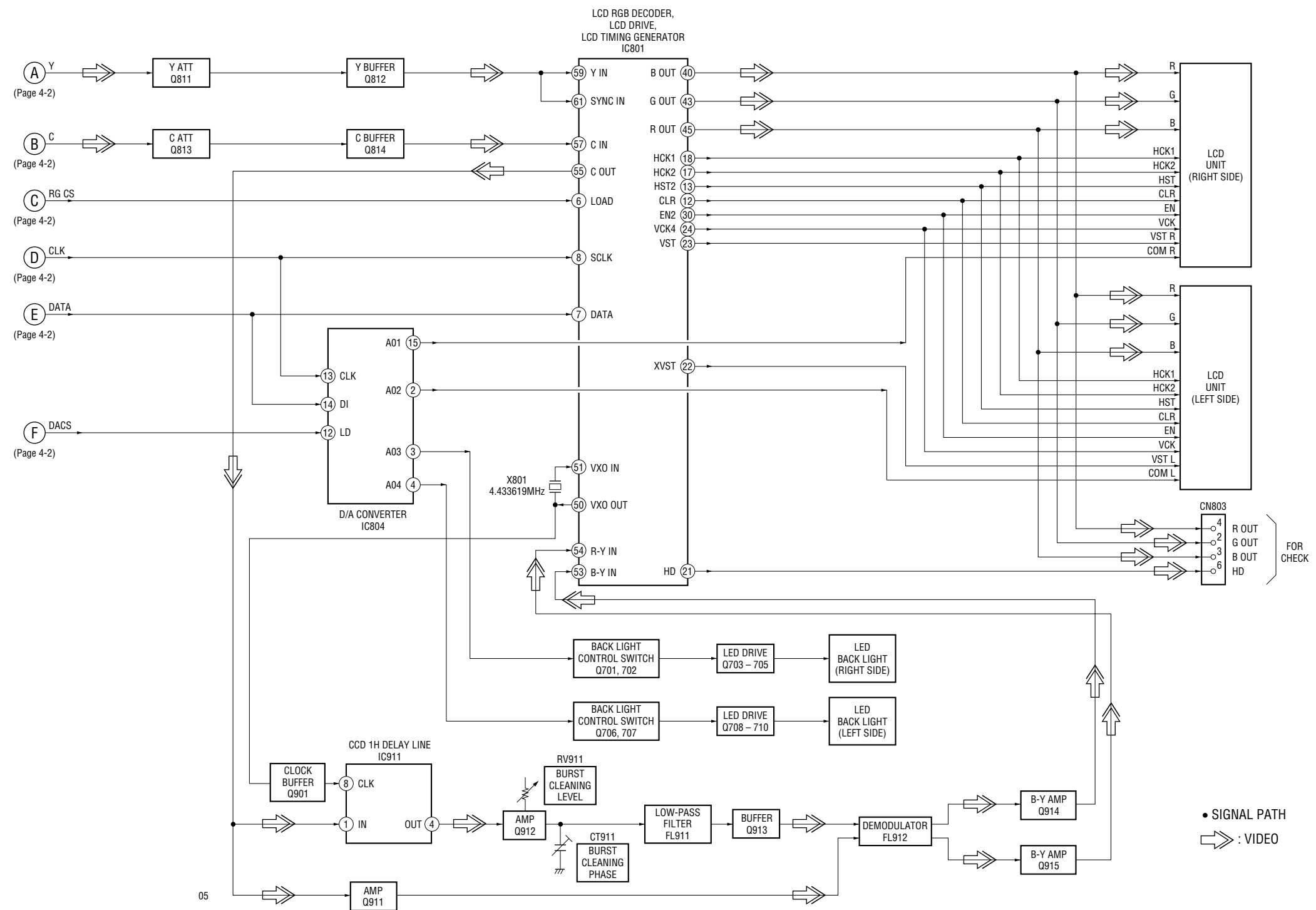
Confidential

SECTION 4 DIAGRAMS

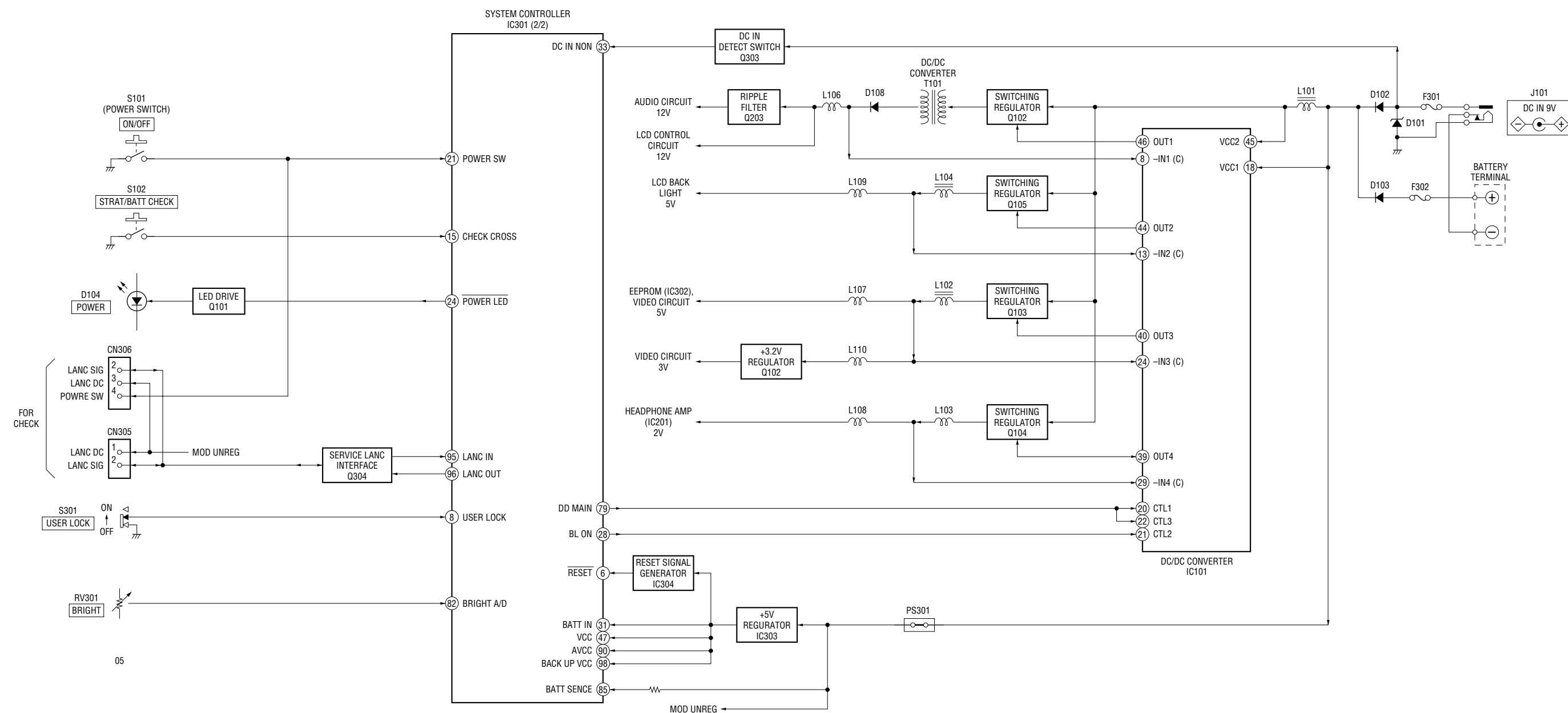
4-1. BLOCK DIAGRAM – AUDIO/VIDEO Section –



4-2. BLOCK DIAGRAM – LCD Section –



4-3. BLOCK DIAGRAM – KEY CONTROL/POWER SUPPLY Section –



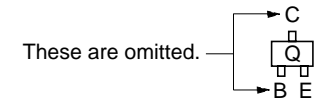
4-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- — : parts extracted from the component side.
- : parts extracted from the conductor side.
- ▨ : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- YM-A01, RG-A01, DL-A01, HP-A01, and DD-A02 boards are multi-layer printed board. However, the patterns of intermediate-layer have not been included in the diagram.
- Indication of transistor



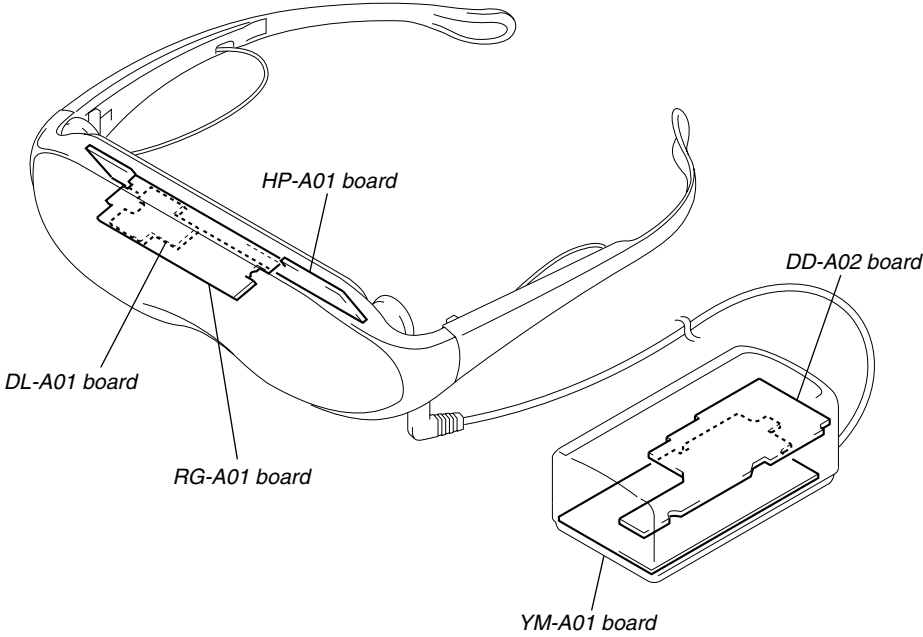
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : panel designation.

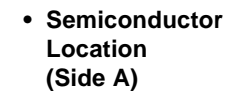
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

- $\boxed{\text{B}+}$: B+ Line.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground in color-bar signal input.
no mark : VIDEO MODE
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 \Rightarrow : AUDIO
 \Rightarrow : VIDEO

• Circuit Boards Location



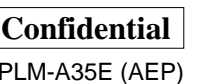
【YM-A01 BOARD】(SIDE A)



- **Semiconductor Location (Side B)**

4-10

【YM-A01 BOARD】(SIDE B)

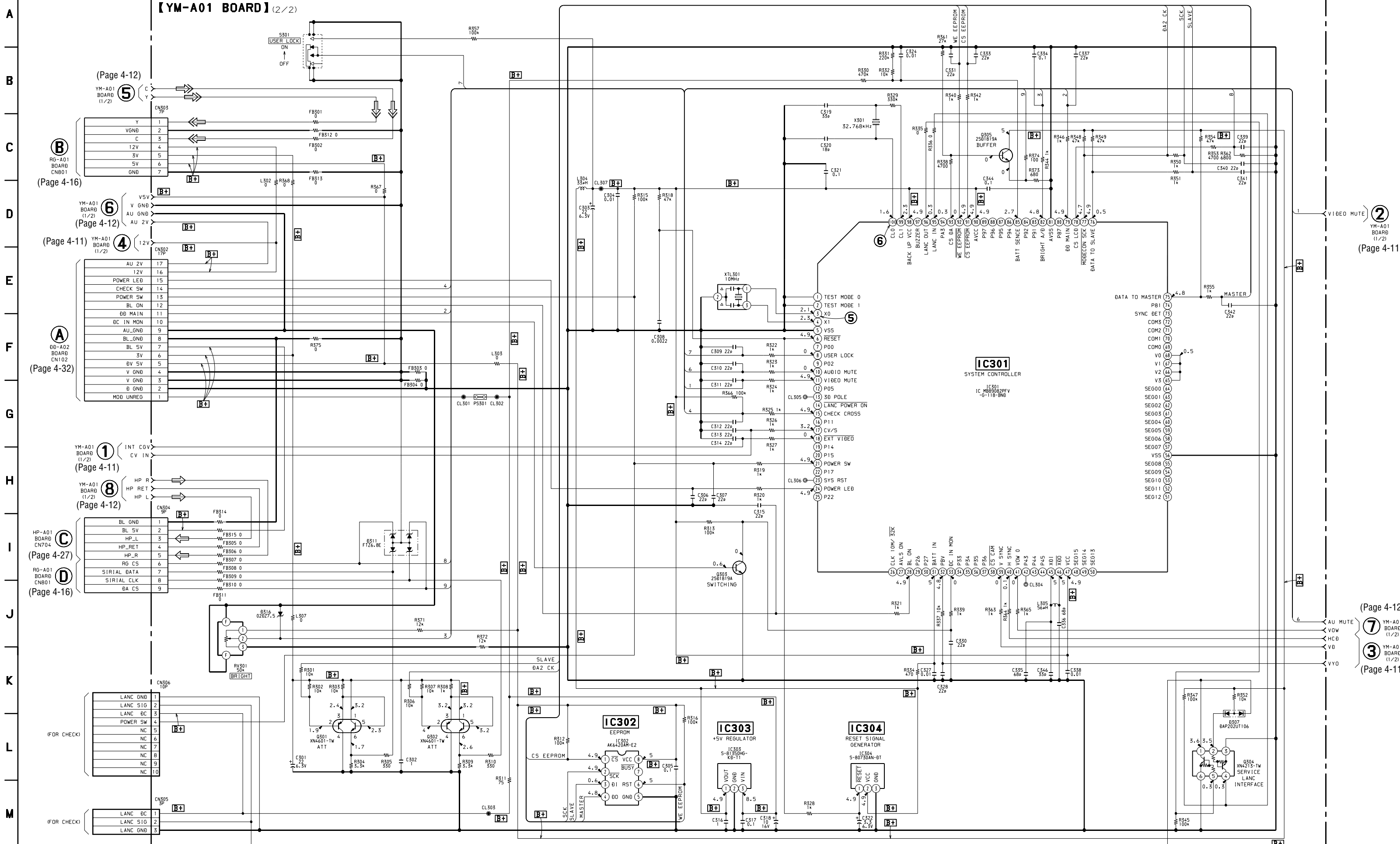


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

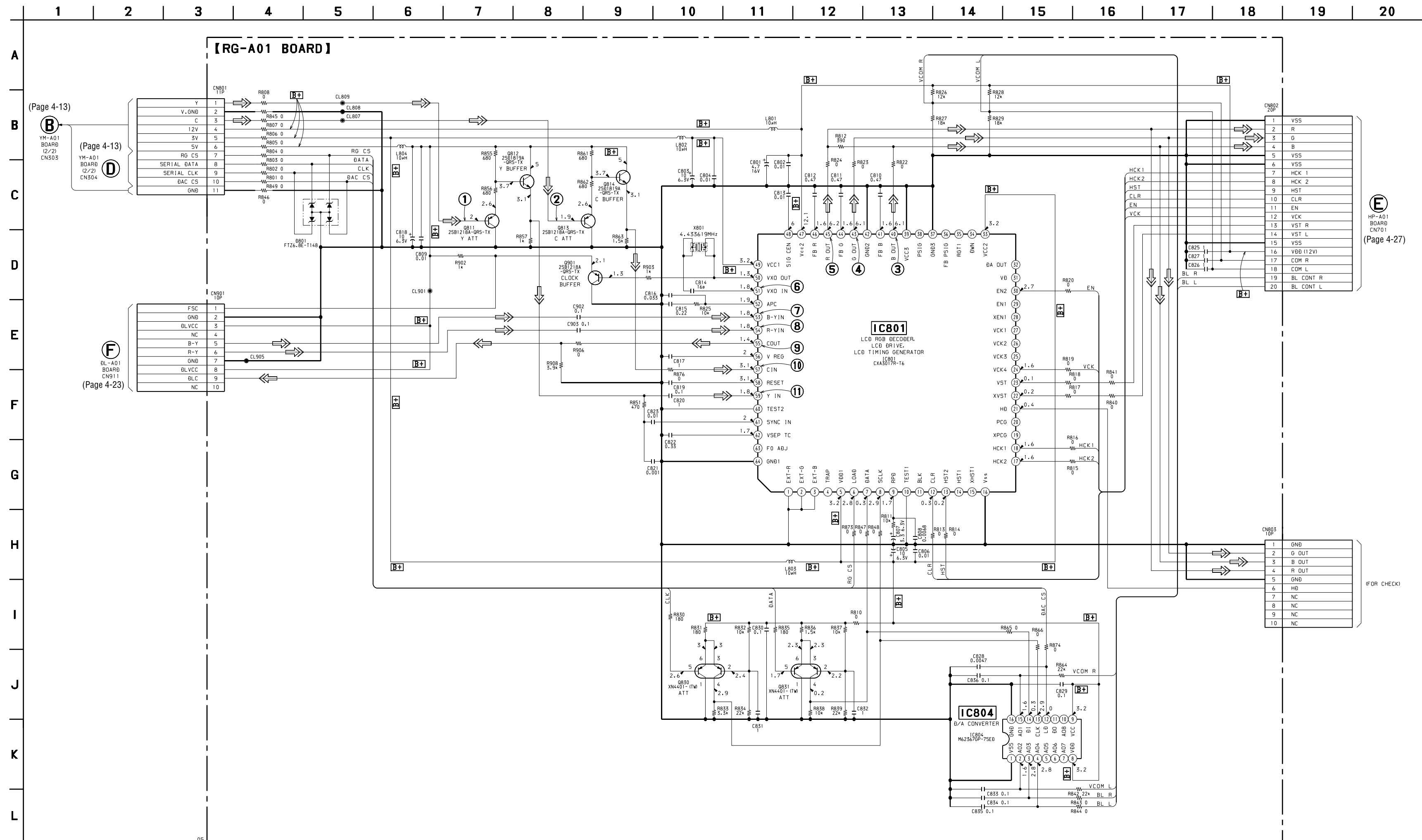


4-12

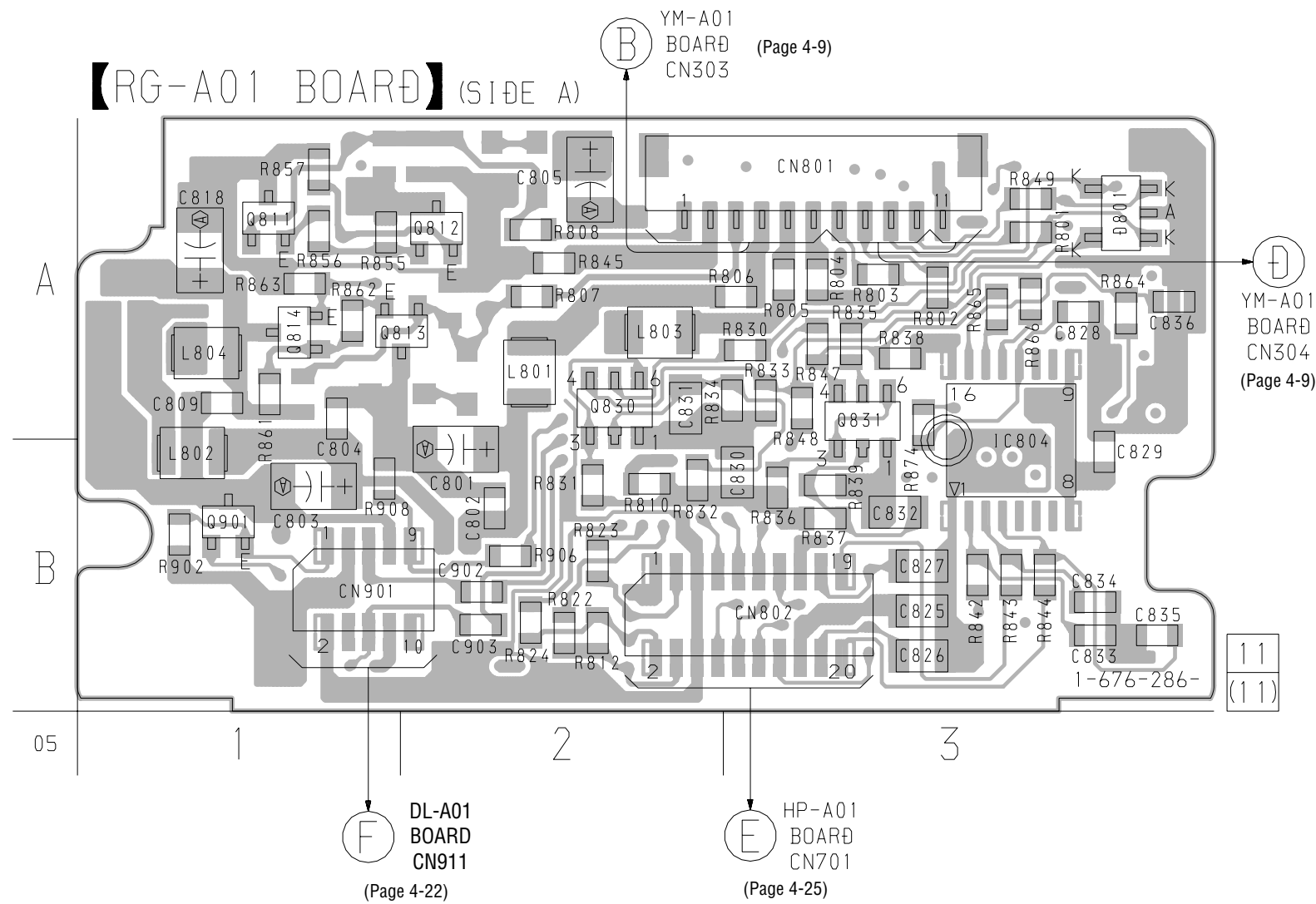
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----



4-8. SCHEMATIC DIAGRAM – RG-A01 Board – • See page 4-33 for Waveforms. • See page 4-38 for IC Block Diagrams.

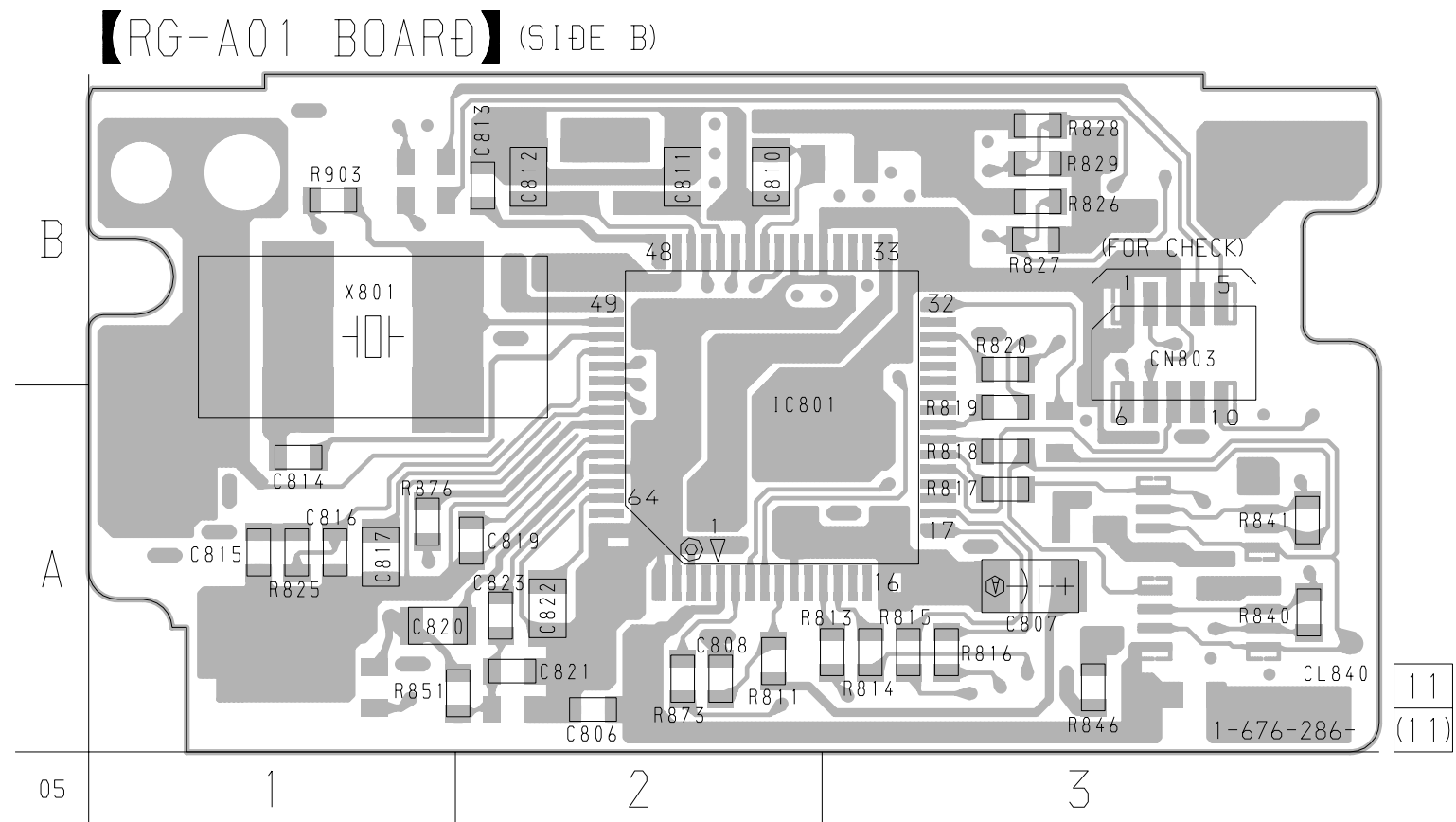


4-9. PRINTED WIRING BOARD – RG-A01 Board – • See page 4-8 for Circuit Boards Location.



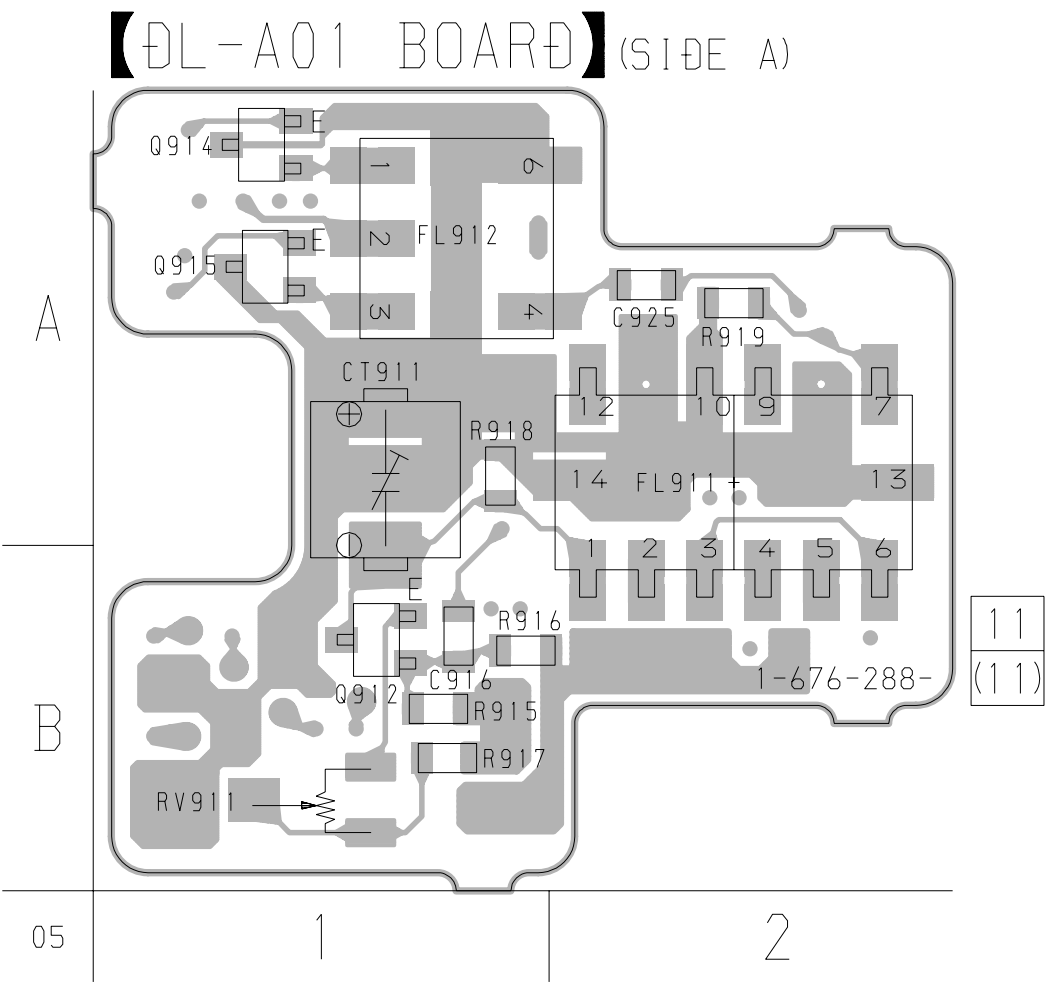
• Semiconductor Location (Side A)

Ref. No.	Location
D801	A-3
IC804	A-3
Q811	A-1
Q812	A-2
Q813	A-1
Q814	A-1
Q830	A-2
Q831	A-3
Q901	B-1



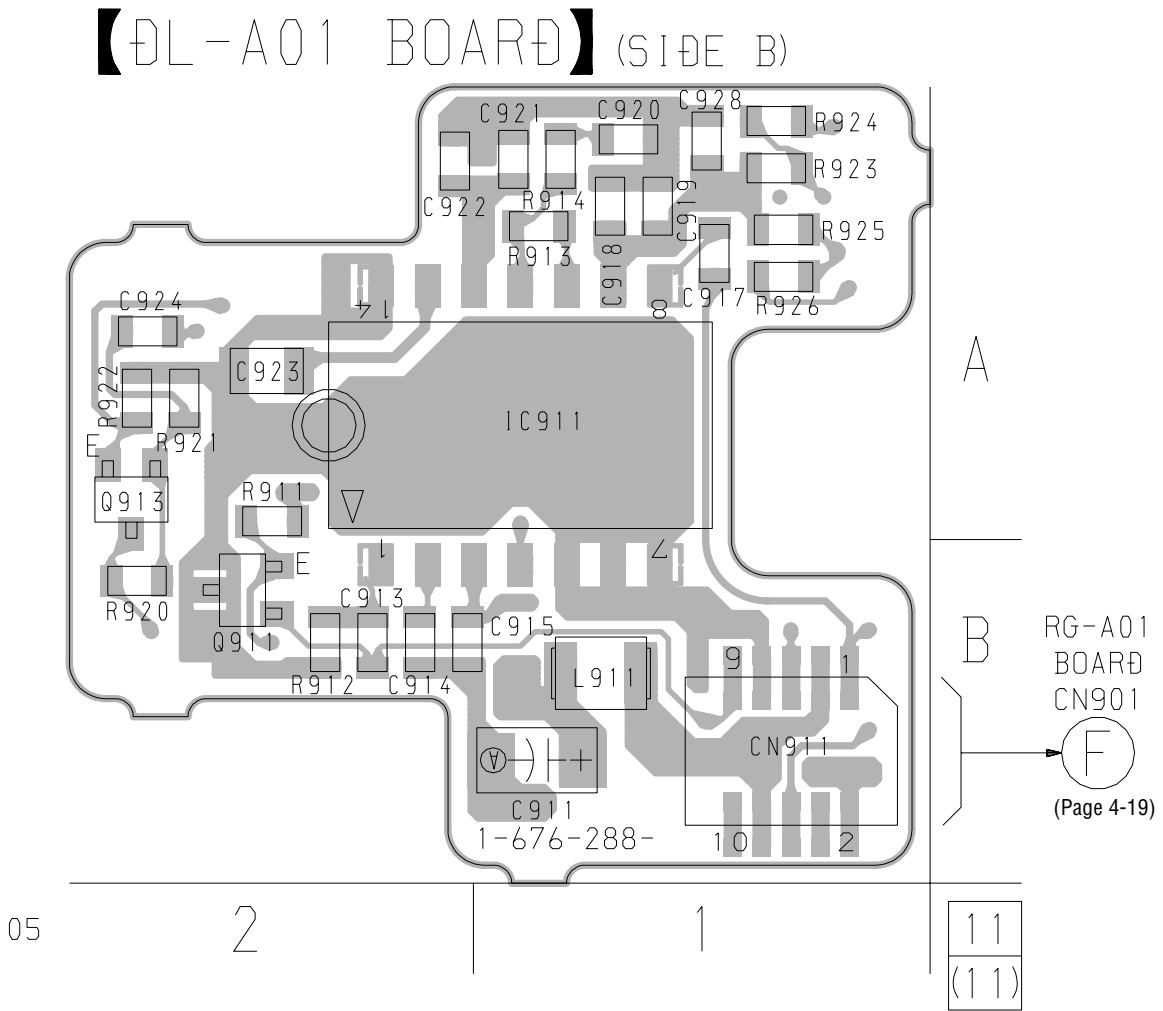
• Semiconductor Location (Side B)

Ref. No.	Location
IC801	A-2



• Semiconductor Location (Side A)

Ref. No.	Location
Q912	B-1
Q914	A-1
Q915	A-1

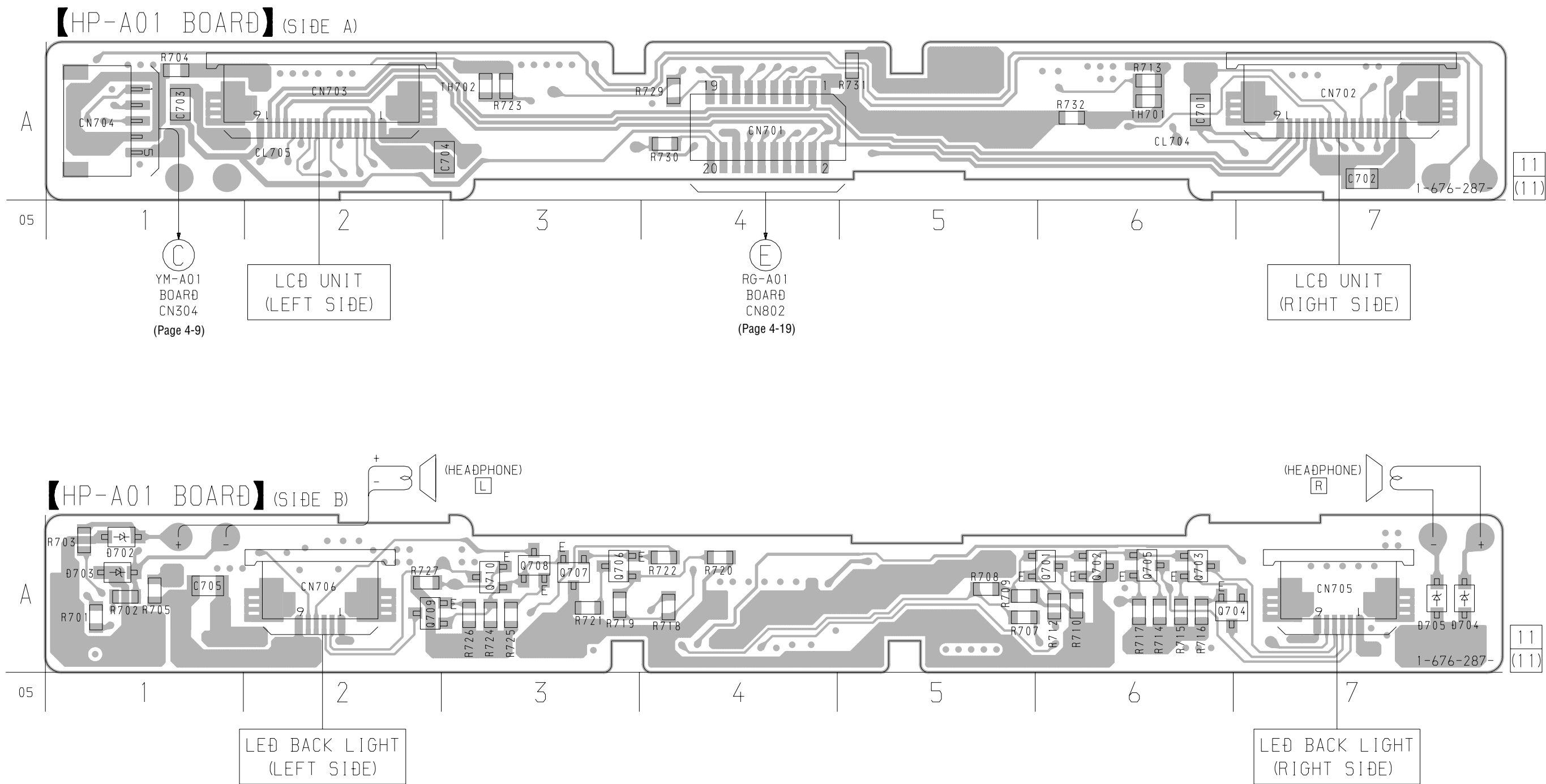


• Semiconductor Location (Side B)

Ref. No.	Location
IC911	A-1
Q911	B-2
Q913	A-2

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----

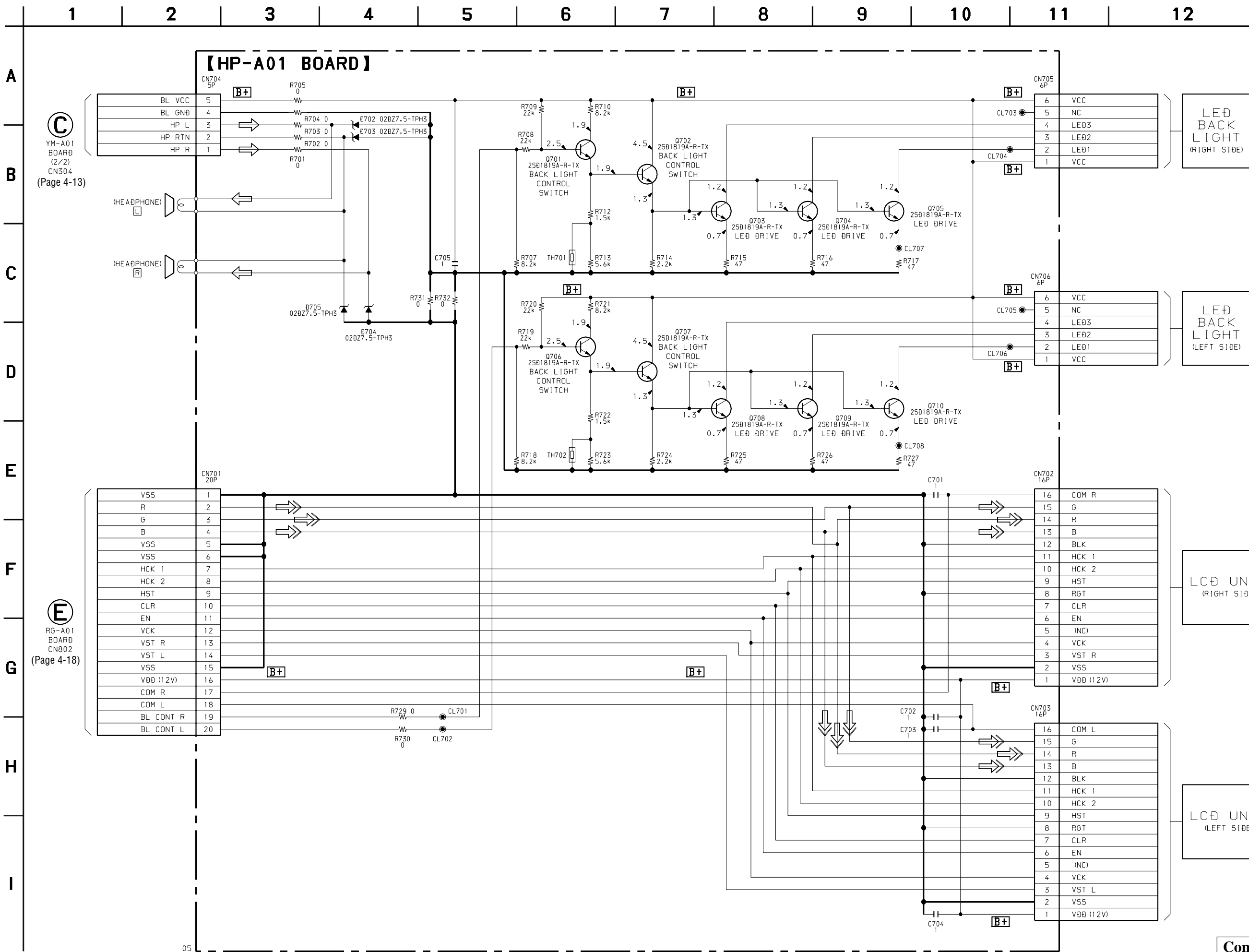




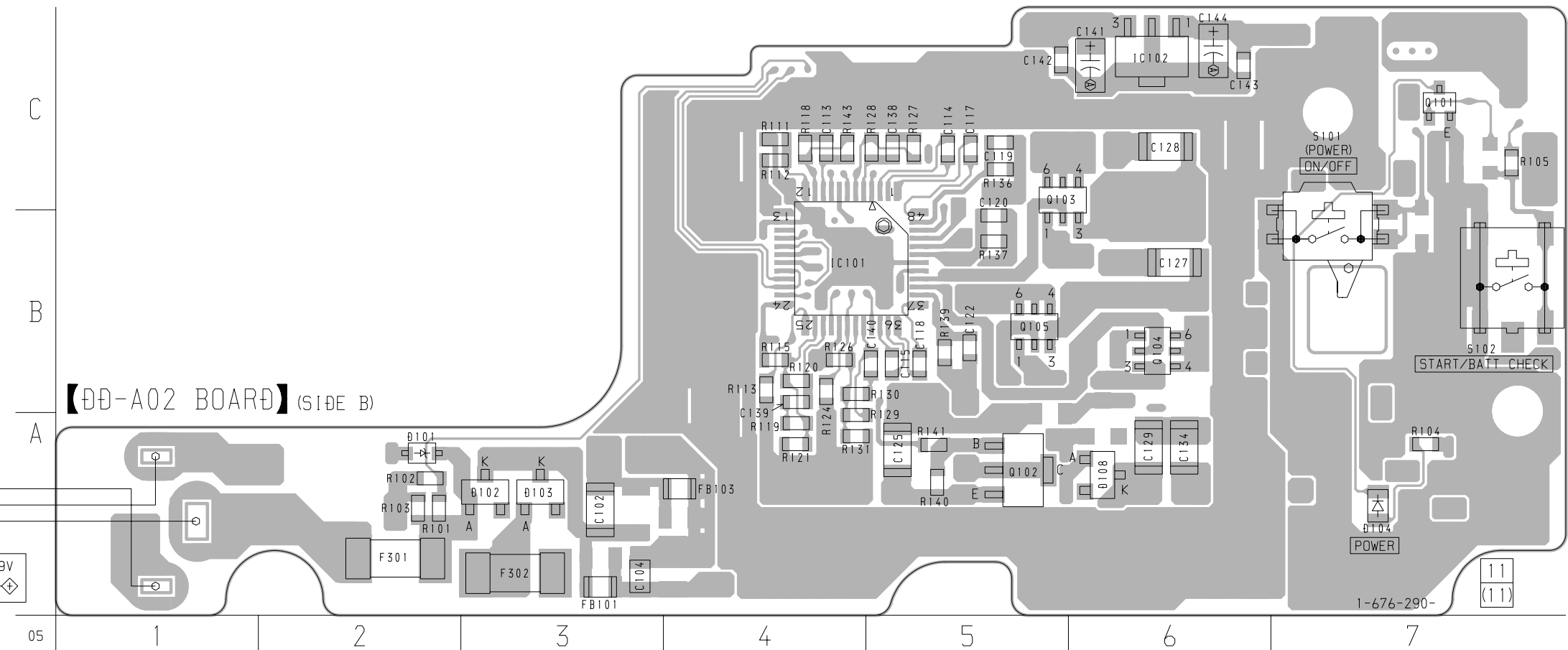
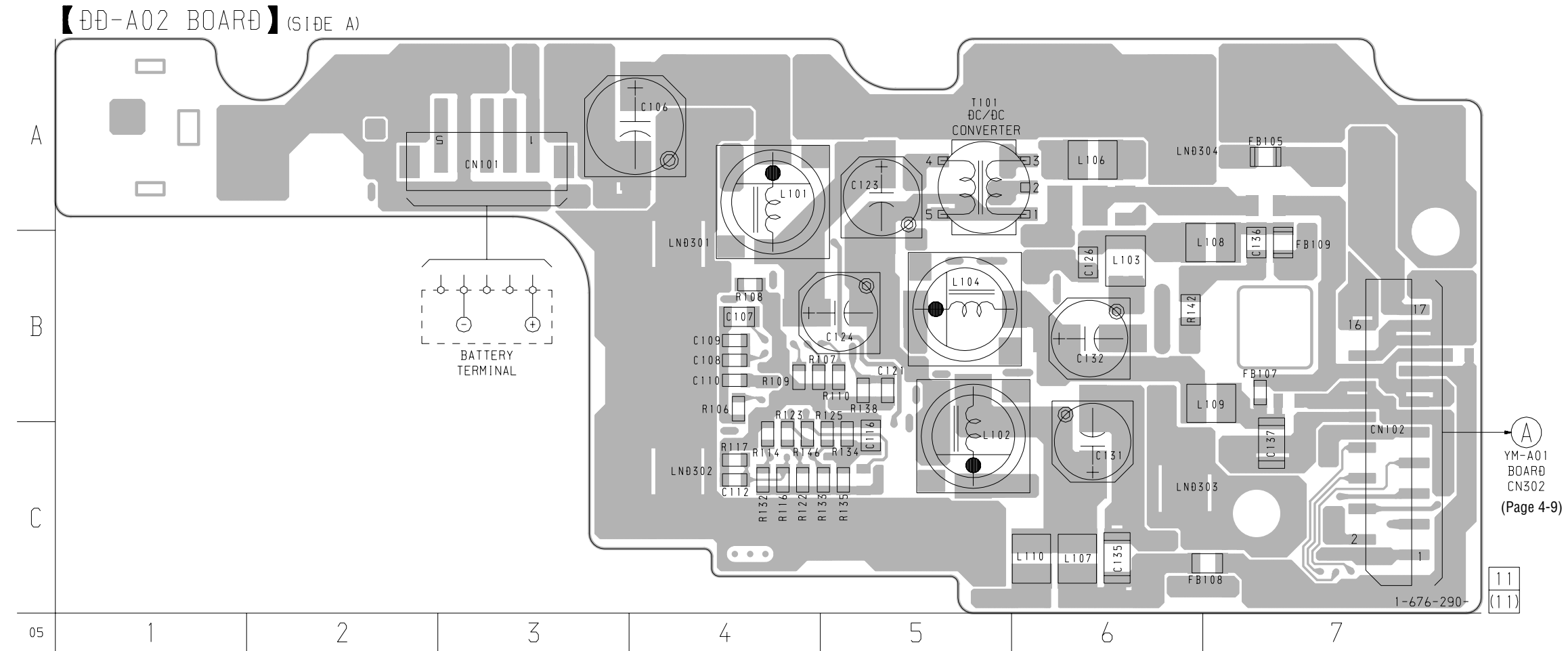
• Semiconductor Location (Side B)

Ref. No.	Location	Ref. No.	Location
D702	A-1	Q704	A-6
D703	A-1	Q705	A-6
D704	A-7	Q706	A-3
D705	A-7	Q707	A-3
		Q708	A-3
Q701	A-6	Q709	A-2
Q702	A-6	Q710	A-3
Q703	A-6		

4-13. SCHEMATIC DIAGRAM – HP-A01 Board –



4-14. PRINTED WIRING BOARD – DD-A02 Board – • See page 4-8 for Circuit Boards Location.



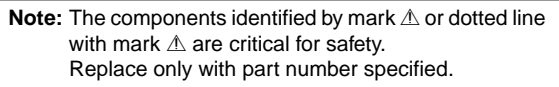
• Semiconductor Location (Side B)

Ref. No.	Location
D101	A-2
D102	A-3
D103	A-3
D104	A-7
D108	A-6
IC101	B-4
IC102	C-6
Q101	C-7
Q102	A-5
Q103	C-5
Q104	B-6
Q105	B-5

Confidential

PLM-A35E (AEP)

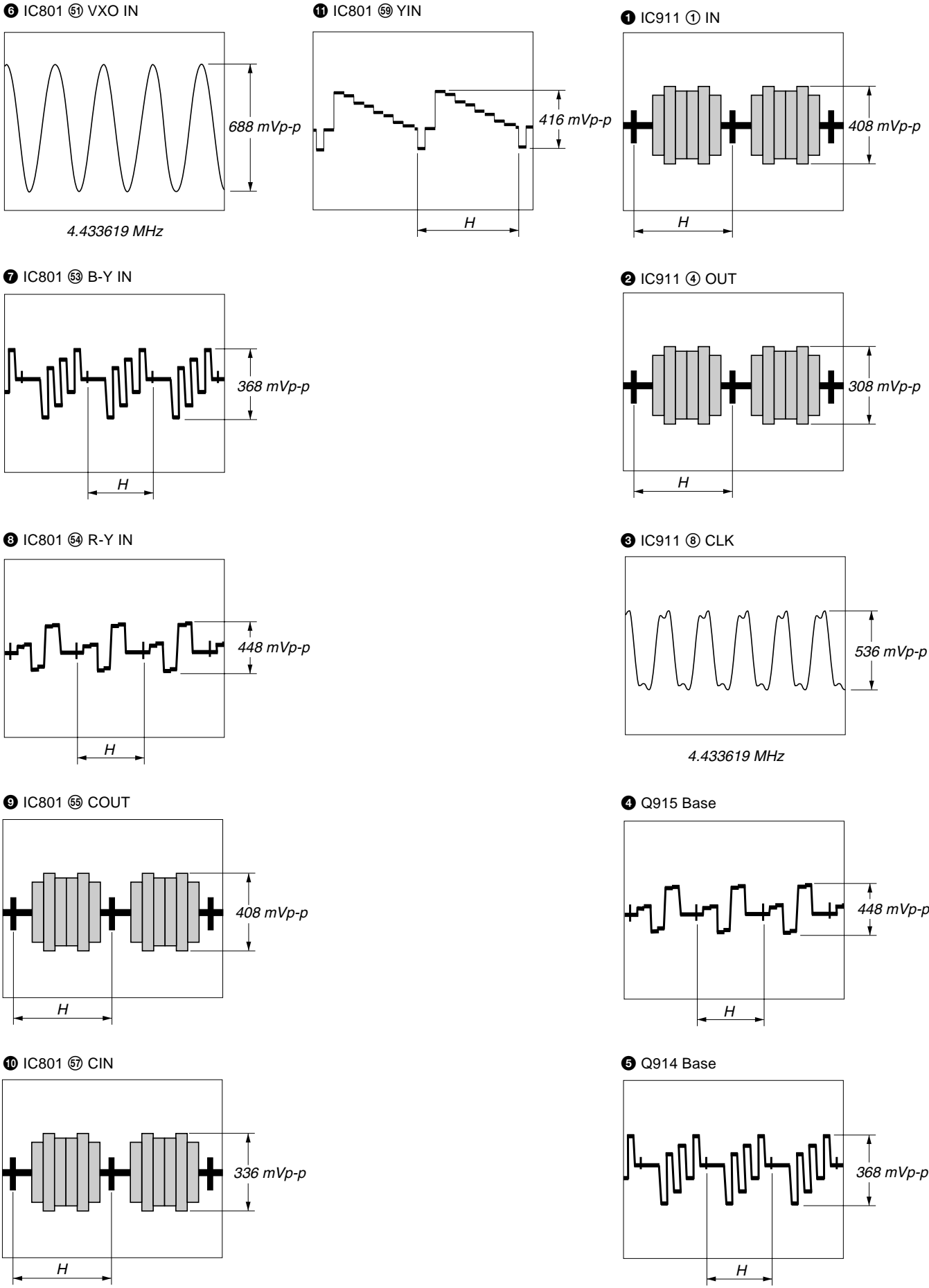
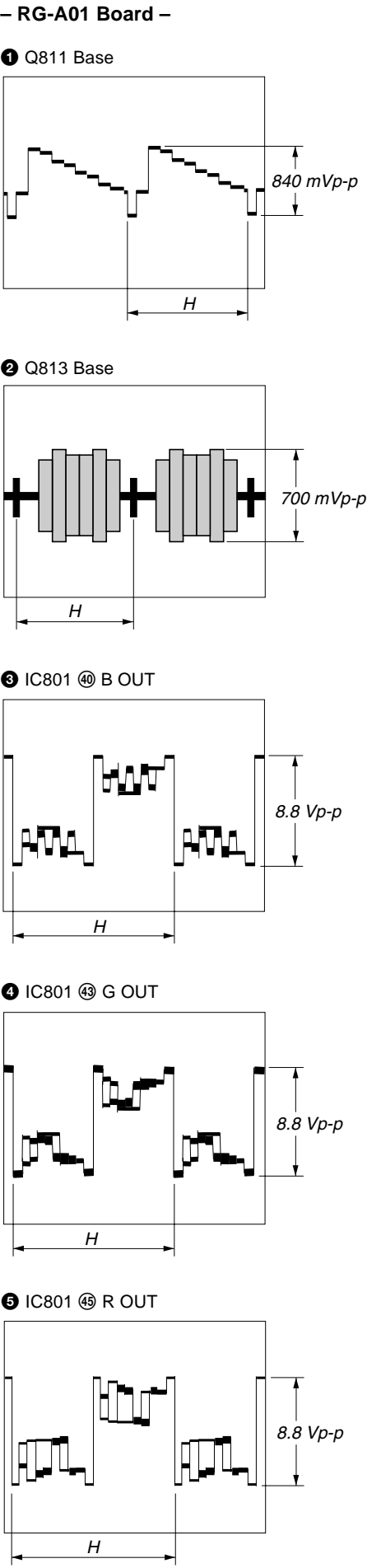
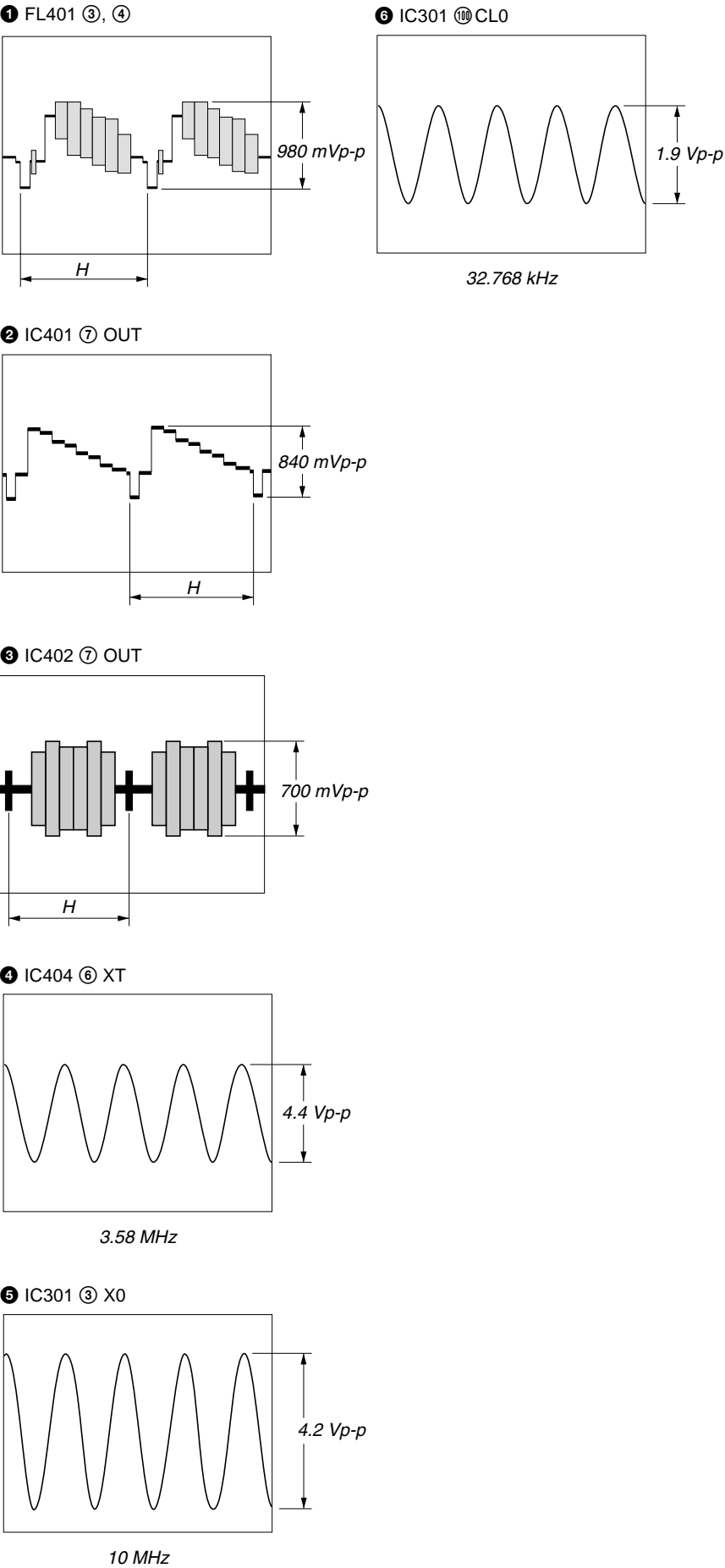
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----



4-31

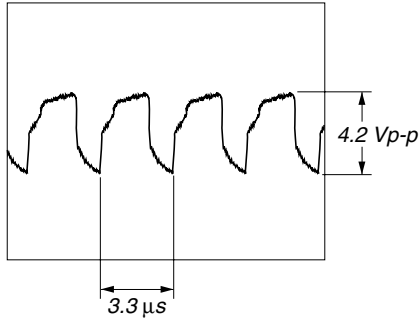
4-32

• Waveforms
–YM-A01 Board –

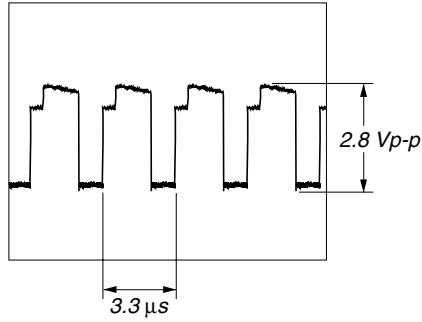


– DD-A02 Board –

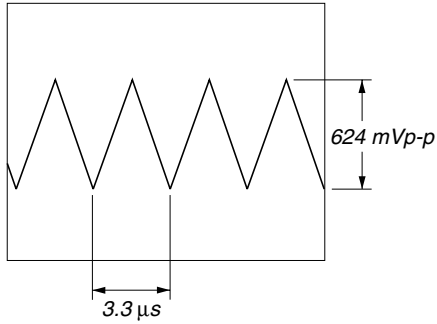
❶ IC101 ① CA1



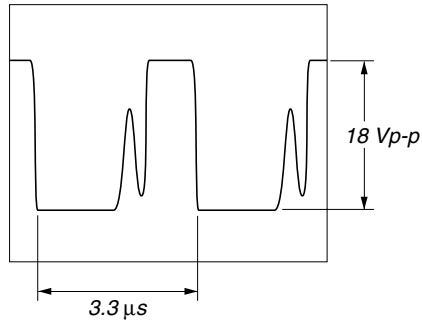
❷ IC101 ④ CB1



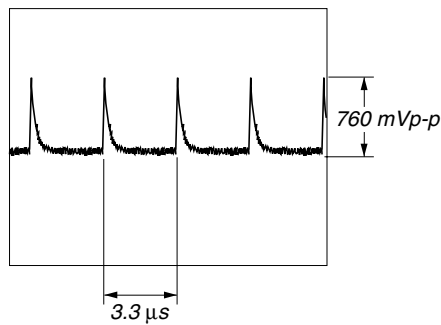
❸ IC101 ⑩ CT



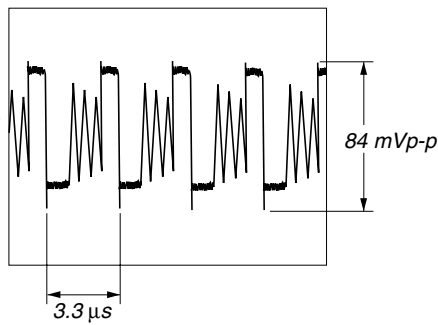
❹ Q102 Collector



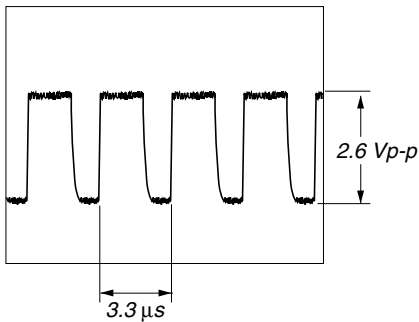
❺ IC101 ③ VE4



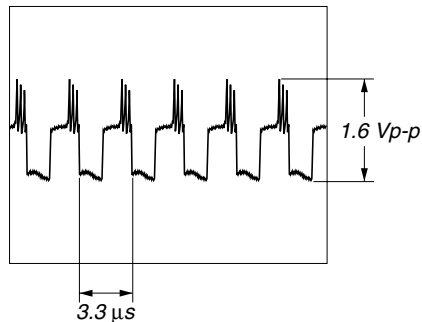
❻ Q102 Base



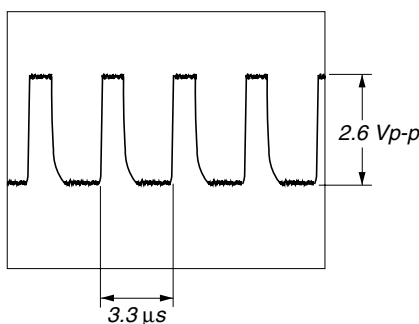
❼ IC101 ④ VE3



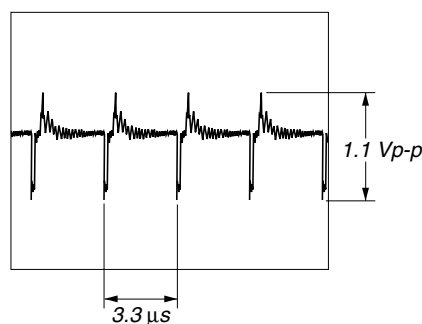
❽ Q105 ②, Q103 ②



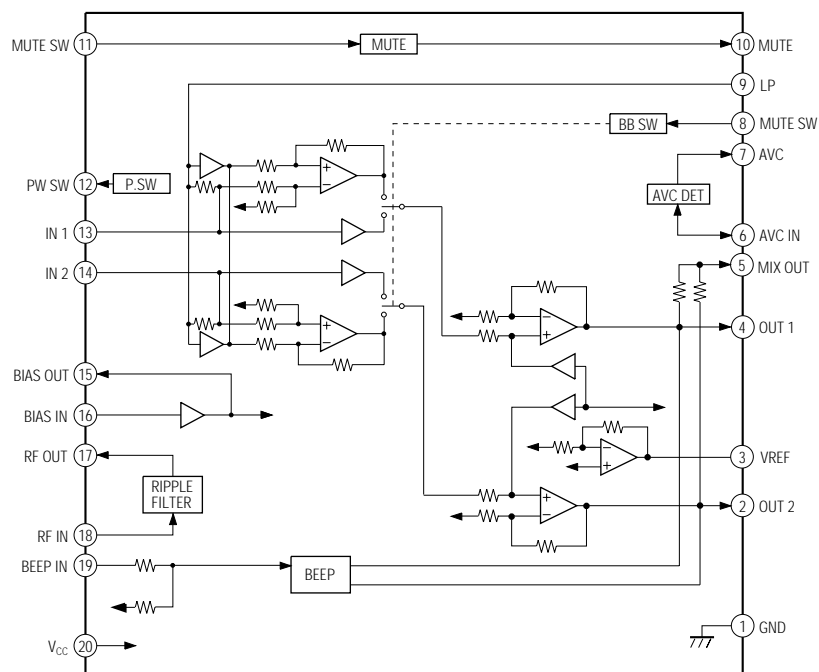
❾ IC101 ④ VE1



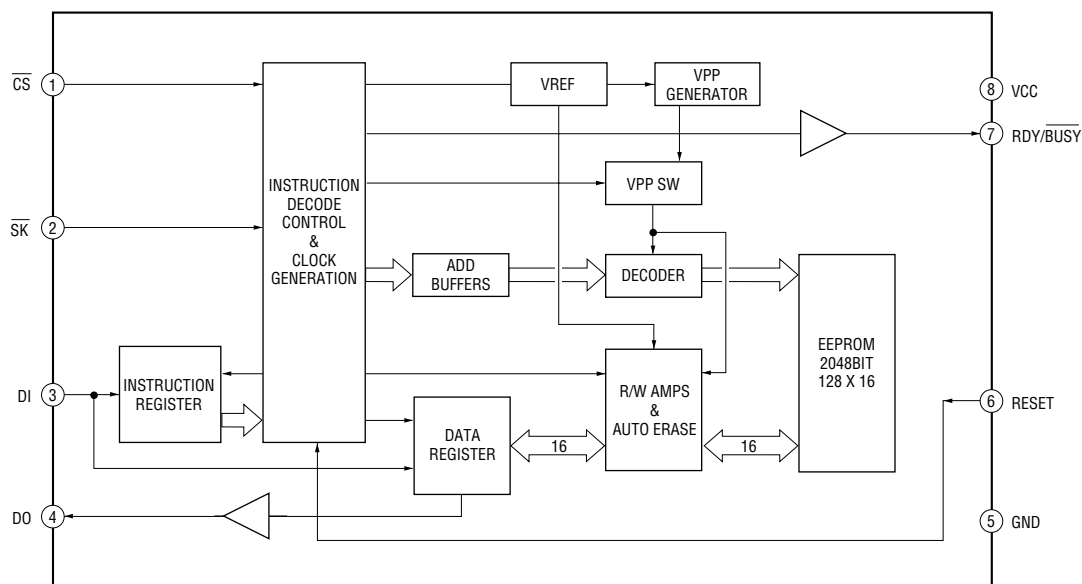
❿ Q104 ②



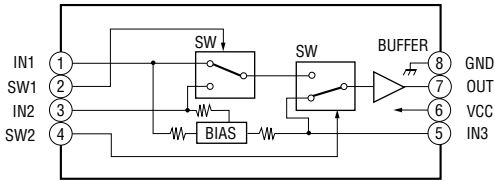
• IC Block Diagrams
 –YM-A01 Board –
IC201 BA3574BFS-E2



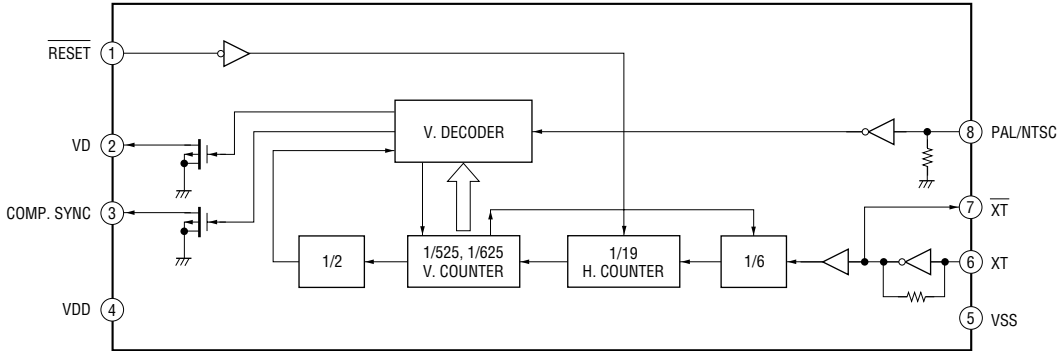
IC302 AK6420AM-E2



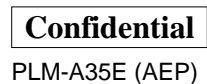
IC401, 402 MM1113XFBE



IC404 MSM5258MS-KR1



IC801 CXA3017R-T6



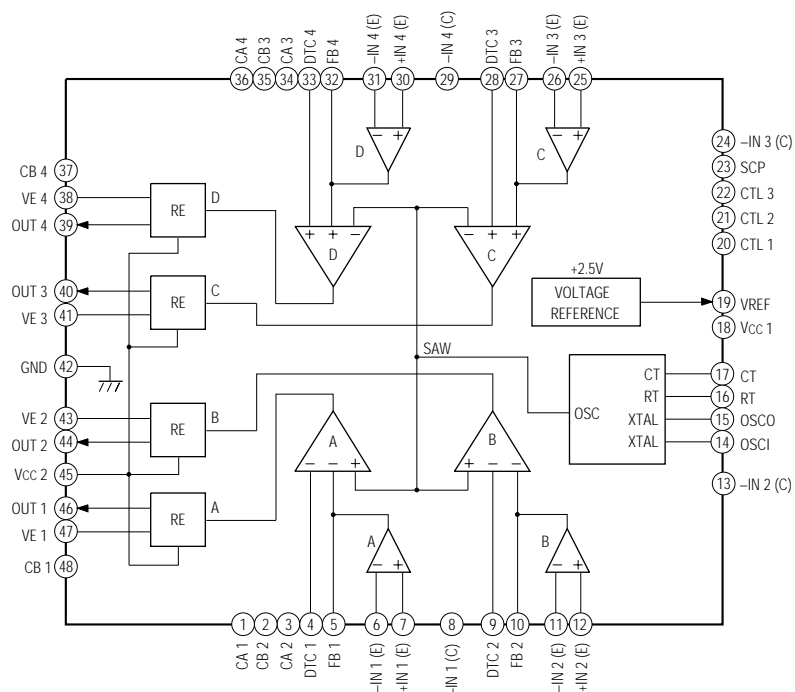
[illegible]

The block diagram illustrates the system architecture and pin connections. The components and their interconnections are as follows:

- Input Section:** The **IN** pin (1) is connected to the **CLAMP CIRCUIT**. The **VG1** (2) and **VG2** (3) pins are also connected to the **CLAMP CIRCUIT**.
- Clamping and Output Section:** The **CLAMP CIRCUIT** is connected to the **CCD (1130BIT)** and the **OUTPUT CIRCUIT**. The **OUTPUT CIRCUIT** produces the **OUT** signal (4).
- Biasing and Timing Section:** The **CCD (1130BIT)** is connected to the **CLOCK DRIVER**. The **CLOCK DRIVER** is connected to the **OUTPUT CIRCUIT** and the **BIAS CIRCUIT (A)**. The **BIAS CIRCUIT (A)** and **BIAS CIRCUIT (B)** are connected to the **OUTPUT CIRCUIT**. The **BIAS CIRCUIT (B)** also provides the **S/H 1BIT** signal.
- Control and Clock Section:** The **CLAMP CIRCUIT** is connected to the **AUTO BIAS CIRCUIT**. The **AUTO BIAS CIRCUIT** is connected to the **CCD (1130BIT)**. The **CLAMP CIRCUIT** is also connected to the **PLL**. The **PLL** is connected to the **CLOCK DRIVER** and the **OUTPUT CIRCUIT**. The **PLL** is also connected to the **CLK** pin (8).
- Power and Control Pins:** The **VSS** (14) and **VDD** (12) pins are connected to the **AUTO BIAS CIRCUIT**. The **VCO IN** (11) and **PC OUT** (10) pins are connected to the **PLL**. The **VCO OUT** (7) pin is connected to the **PLL**.

– DD-A02 Board –

IC101 MB3785APFV-G-BND-ER



4-16. IC PIN FUNCTION DESCRIPTION

• YM-A01 BOARD IC301 MB89082PFV-G-118-BND (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	TEST MODE 0	I	Setting terminal for the test mode (Normally: fixed at “L”)
2	TEST MODE 1	I	Setting terminal for the test mode (Normally: fixed at “L”)
3	X0	I	Main system clock input terminal (10MHz)
4	X1	O	Main system clock output terminal (10MHz)
5	VSS	—	Ground terminal
6	RESET	I	System reset signal input from the reset signal generator (IC304) “L” reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
7	P00	—	Not used (open)
8	USER LOCK	I	USER LOCK switch (S301) input terminal “H”: user lock on
9	P02	—	Not used (open)
10	AUDIO MUTE	O	Audio line muting control signal output terminal “H”: muting on
11	VIDEO MUTE	O	Video muting control signal output terminal “H”: muting on
12	P05	—	Not used (open)
13	3D MODE	O	3D mode selection signal output terminal “L”: 3D mode “H”: normal mode Not used (open)
14	LANC POWER ON	I	Power supply control input of the LANC “L”: power on Not used (open)
15	CHECK CROSS	I	START/BATT CHECK switch (S102) input terminal
16	P11	—	Not used (open)
17	CV/S	I	Connection detect signal input of the S video in jack (J401) “L”: connection
18	EXT VIDEO	O	External video signal output to the video select switch (IC401, 402)
19, 20	P14, P15	—	Not used (open)
21	POWER SW	I	ON/OFF (power) switch (S101) input terminal (toggle input) “L” is input when power is turned on/off
22	P17	—	Not used (open)
23	SYS RST	O	Reset signal output terminal “L”: reset Not used (open)
24	POWER LED	O	LED drive signal output of the POWER indicator (D104) “H”: LED on
25	P22	—	Not used (open)
26	CLK 10M/32K	I	Selection input of the clock frequency “L”: 32 kHz, “H”: 10 MHz Not used (open)
27	AVLS ON	O	AVLS (Automatic Volume Limiter System) control signal output terminal “H”: AVLS on Not used (open)
28	BL ON	O	Back light unit on/off control signal output to the DC/DC converter (IC101) “H”: back light on
29, 30	P26, P27	—	Not used (open)
31	BATT IN	I	Power failure detection input terminal
32	PBV	I	Vertical sync reference signal input terminal
33	DC IN MON	I	DC IN detection input terminal “L”: DC present
34 to 37	P33 to P36	—	Not used (open)
38	CS CAM	O	Chip select signal output terminal Not used (open)
39	V SYNC	I	Verticalsync signal input terminal
40	H SYNC	I	Horizontal sync signal input terminal
41	VOW 0	O	VOW signal output terminal
42 to 44	P43 to P45	—	Not used (open)
45	XDI	I	Clock signal input terminal
46	XDO	O	Clock signal output terminal
47	VCC	—	Power supply terminal (+5V)
48 to 55	SEG15 to SEG08	O	LCD segment drive signal output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
56	VSS	—	Ground terminal
57 to 64	SEG07 to SEG00	O	LCD segment drive signal output terminal Not used (open)
65 to 68	V3 to V0	I	Bias voltage input for the LCD drive Not used
69 to 72	COM0 to COM3	O	LCD common drive signal output terminal Not used (open)
73	SYNC DET	I	Input terminal of check signal whether sync signal is present or not Not used (open)
74	P81	—	Not used (open)
75	DATA TO MASTER	I	Serial data input from the EEPROM (IC302)
76	DATA TO SLAVE	O	Serial data output to the EEPROM (IC302), LCD timing generator (IC801), and D/A converter (IC804)
77	<u>MODECON SCK</u>	O	Serial data transfer clock signal output to the EEPROM (IC302), LCD timing generator (IC801), and D/A converter (IC804)
78	CS LCD	O	Chip select signal output to the LCD timing generator (IC801)
79	DD MAIN	O	Main power supply control signal output to the DC/DC converter (IC101)
80	P87	—	Not used (open)
81	AVSS	—	Ground terminal (for A/D input)
82	BRIGHT A/D	I	Brightness control (RV301) input terminal
83, 84	P91, P92	—	Not used (open)
85	BATT SENCE	I	Input of battery capacity detection when rechargeable battery is used (A/D input)
86 to 89	P94 to P97	—	Not used (open)
90	AVCC	—	Power supply terminal (+5V) (for A/D input)
91	<u>CS EEPROM</u>	O	Chip select signal output to the EEPROM (IC302)
92	<u>WE EEPROM</u>	O	Data write enable signal output to the EEPROM (IC302)
93	CS DA	O	Chip select signal output to the D/A converter (IC804)
94	PA3	—	Not used (open)
95	LANC IN	I	LANC serial data input terminal (for check)
96	LANC OUT	O	LANC serial data output terminal (for check)
97	BUZZER	O	Buzzer sound output terminal Not used (open)
98	BACK UP VCC	—	Power supply terminal (+5V)
99	CL1	O	Sub system clock output terminal (32.768 kHz)
100	CL0	I	Sub system clock input terminal (32.768 kHz)

• **RG-A01 BOARD IC801 CXA3017R-T6 (LCD RGB DECODER, LCD DRIVE, LCD TIMING GENERATOR)**

Pin No.	Pin Name	I/O	Description
1	EXT R	I	External digital R signal input terminal Not used (fixed at “L”)
2	EXT G	I	External digital G signal input terminal Not used (fixed at “L”)
3	EXT B	I	External digital B signal input terminal Not used (fixed at “L”)
4	TRAP	O	External trap connection terminal Not used (open)
5	VDD1	—	Power supply terminal (+3V) (digital system)
6	LOAD	I	Chip select signal input from the system controller (IC301)
7	DATA	I	Serial data input from the system controller (IC301)
8	SCLK	I	Serial data transfer clock signal input from the system controller (IC301)
9	RPD	O	Phase comparator output terminal
10	TEST1	I	Input terminal for the test Not used (fixed at “L”)
11	BLK	O	Blanking pulse signal output terminal Not used (open)
12	CLR	O	Clear pulse signal output to the left and right LCD units
13	HST2	O	Horizontal start pulse 2 signal output to the left and right LCD units
14	HST1	O	Horizontal start pulse 1 signal output terminal Not used (open)
15	XHST1	O	Horizontal start pulse 1 signal output terminal (reverse polarity of the HST1 ⑭ pin) Not used (open)
16	VSS	—	Ground terminal (digital system)
17	HCK2	O	Horizontal clock pulse 2 signal output to the left and right LCD units
18	HCK1	O	Horizontal clock pulse 1 signal output to the left and right LCD units
19	XPCG	O	Pre charge pulse signal output terminal (reverse polarity of the PCG ⑳ pin) Not used (open)
20	PCG	O	Pre charge pulse signal output terminal Not used (open)
21	HD	O	Horizontal drive pulse signal output terminal
22	XVST	O	Vertical start pulse signal output to the left LCD unit (reverse polarity of the VST ㉑ pin)
23	VST	O	Vertical start pulse signal output to the right LCD unit
24	VCK4	O	Vertical clock pulse 4 signal output to the left and right LCD units
25	VCK3	O	Vertical clock pulse 3 signal output terminal Not used (open)
26	VCK2	O	Vertical clock pulse 2 signal output terminal Not used (open)
27	VCK1	O	Vertical clock pulse 1 signal output terminal Not used (open)
28	XEN1	O	Enable pulse 1 signal output terminal (reverse polarity of the EN1 ㉒ pin) Not used (open)
29	EN1	O	Enable pulse 1 signal output terminal Not used (open)
30	EN2	O	Enable pulse 2 signal output to the left and right LCD units
31	VD	O	Vertical drive pulse signal output terminal Not used (open)
32	DA OUT	O	DAC signal output terminal Not used (open)
33	VDD2	—	Power supply terminal (+3V) (digital system)
34	DWN	O	Up/down scan inversion switching signal output terminal (open collector output) Not used (open)
35	RGT1	O	Left/right scan inversion switching signal output terminal (open collector output) Not used (open)
36	FB PSIG	I	Capacitor connection terminal for DC voltage feedback circuit of PSIG signal (pin ㉓) Not used (open)
37	GND3	—	Ground terminal (analog system) for PSIG
38	PSIG	O	PSIG signal output terminal Not used (open)
39	VCC3	—	Power supply terminal (+12V) (analog system) for PSIG Not used
40	B OUT	O	B signal (primary color signal) output to the left and right LCD units
41	FB B	I	Capacitor connection terminal for DC voltage feedback circuit of B signal (pin ㉔)
42	GND2	—	Ground terminal (analog system)

Pin No.	Pin Name	I/O	Description
43	G OUT	O	G signal (primary color signal) output to the left and right LCD units
44	FB G	I	Capacitor connection terminal for DC voltage feedback circuit of G signal (pin ④⑨)
45	R OUT	O	R signal (primary color signal) output to the left and right LCD units
46	FB R	I	Capacitor connection terminal for DC voltage feedback circuit of R signal (pin ④⑨)
47	VCC2	—	Power supply terminal (+12V) (analog system)
48	SIG. SENTER	I	DC voltage adjustment terminal for R, G, B, and PSIG signals output
49	VCC1	—	Power supply terminal (+3V) (analog system)
50	VXO OUT	O	System clock output terminal (4.433619MHz)
51	VXO IN	I	System clock input terminal (4.433619MHz)
52	APC	O	Connection terminal of APC detection filter
53	B-Y IN	I	B-Y color difference-signal input from the demodulating circuit
54	R-Y IN	I	R-Y color difference-signal input from the demodulating circuit
55	C OUT	O	Video signal (chroma signal) output to the CCD 1H delay line (IC911)
56	V REG	O	Ground for a smoothing capacitor in internal constant-voltage power supply circuit
57	C IN	I	Video signal (chroma signal) input terminal
58	RESET	I	System reset terminal
59	Y IN	I	Video signal (brightness signal) input terminal
60	TEST2	I	Input terminal for the test Not used (fixed at “L”)
61	SYNC IN	I	Video signal (brightness signal) input to the sync separation circuit
62	VSEP TC	—	Capacitor connection terminal for vertical sync separation
63	F0 ADJ	O	Resistor connection terminal for internal filter adjustment Not used (open)
64	GND1	—	Ground terminal (analog system)

SECTION 5

EXPLODED VIEWS

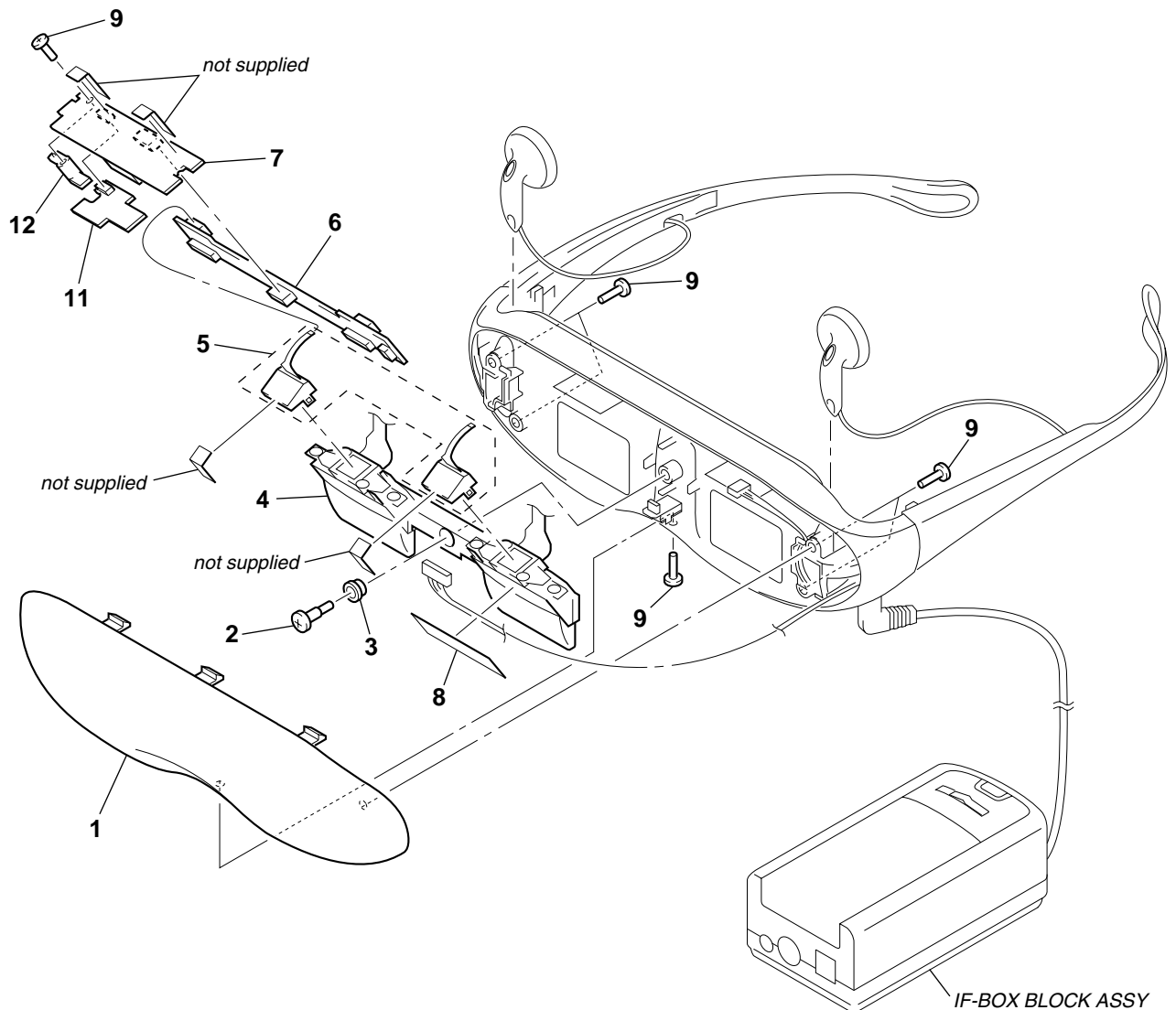
NOTE:

- XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

Parts Color Cabinet's Color

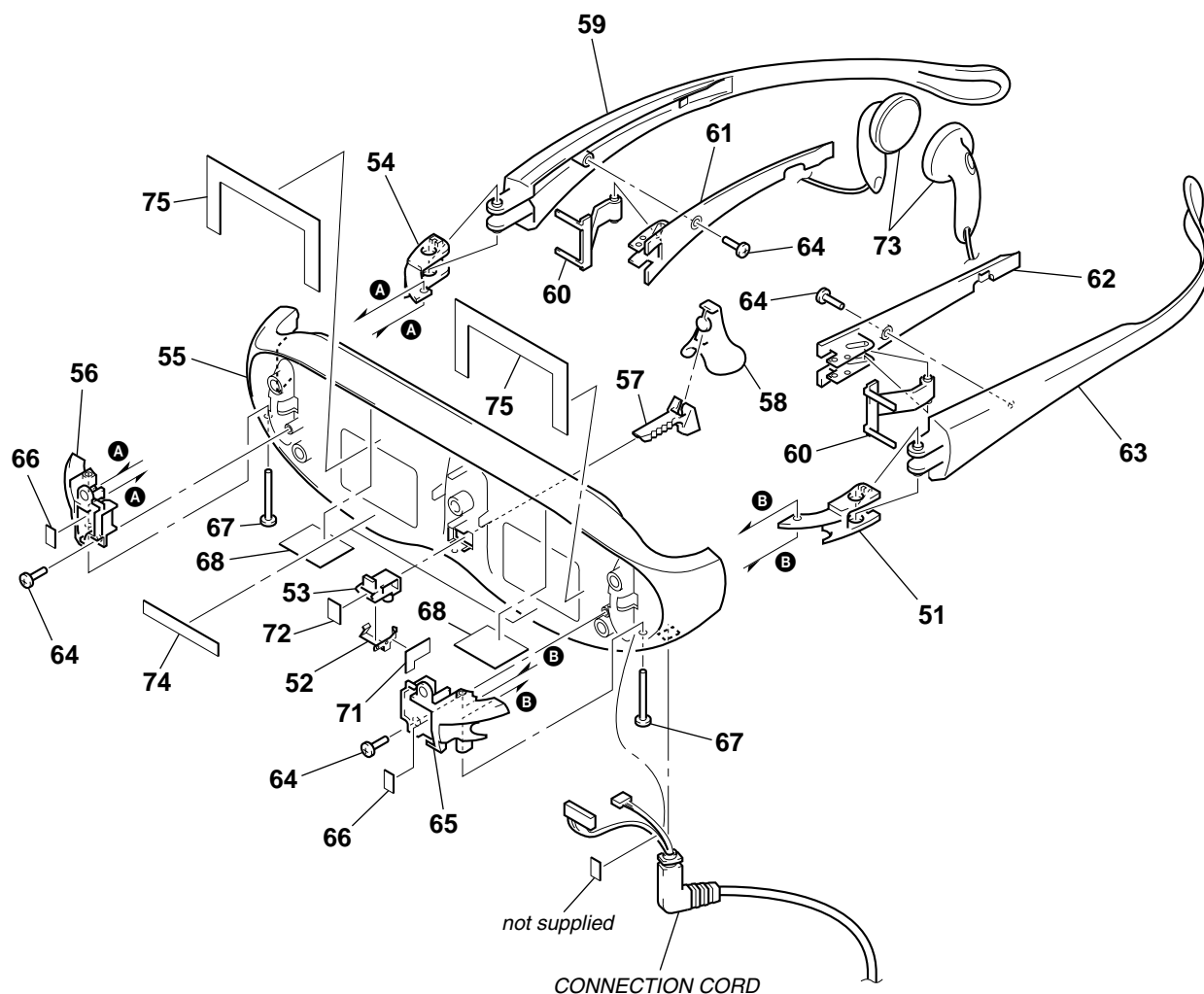
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

(1) CABINET SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-644-700-05	CABINET (FRONT)		7	A-8056-676-A	RG-A01 (C) COMPLETE PWB	
2	4-644-716-01	SCREW, STEP		8	4-645-476-01	SHEET, CORD CLAMP	
3	4-644-703-01	INSULATOR		9	3-929-548-11	SCREW (1.7X6), +PTT	
4	1-418-753-11	LENS BLOCK		11	A-8056-669-A	DL-A01 COMPLETE PWB	
5	1-418-752-21	LIGHT UNIT, BACK (S)		12	4-647-055-01	HOLDER, PC BOARD	
6	A-8056-675-A	HP-A01 (C) MOUNTED PWB					

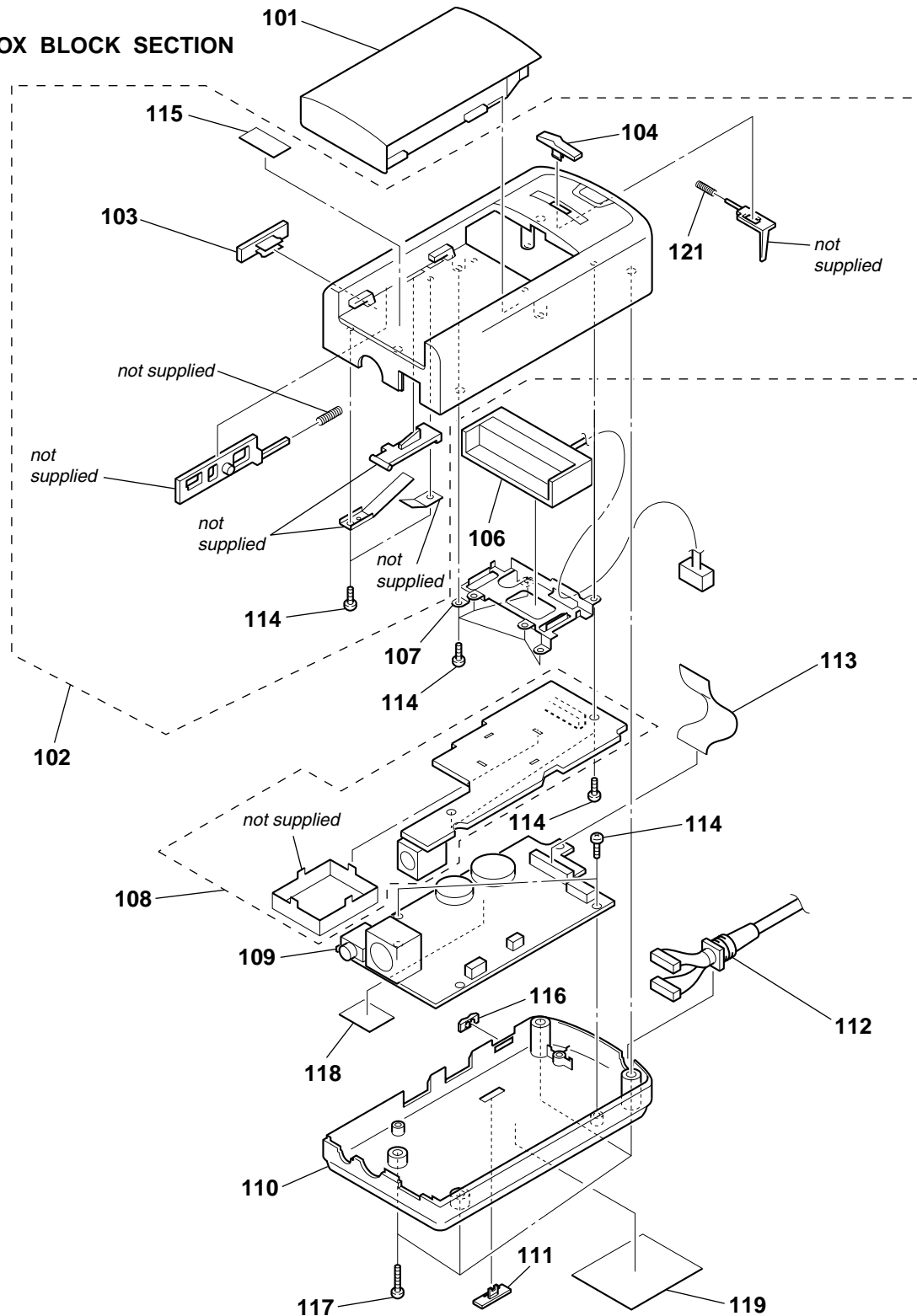
(2) CABINET SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-644-739-01	BEARING (L), HINGE		63	4-644-735-02	VINE (L)	
52	4-644-704-02	SPRING, NOSE		64	3-929-548-11	SCREW (1.7X6), +PTT	
53	4-644-705-01	BLOCK, NOSE		65	4-644-737-02	BLOCK (L), HINGE	
54	4-644-738-01	BEARING (R), HINGE		66	4-645-477-01	SHEET, HINGE BLIND	
55	X-4622-756-1	CABINET (REAR) ASSY		67	4-645-431-01	SCREW (2X20), +PTT	
56	4-644-736-02	BLOCK (R), HINGE		68	4-645-478-01	SHEET, FLEXIBLE ELECTROSTATIC	
57	4-644-702-01	SHAFT, NOSE		71	4-645-974-01	SHEET (HORIZONTAL), NOSE BLOCK	
58	4-644-701-12	PAD, NOSE		72	4-645-973-01	SHEET (REAR), NOSE BLOCK	
59	4-644-734-02	VINE (R)		73	8-953-771-90	RECEIVER, EAR MDR-E805PT//K SET	
60	4-644-742-02	ADJUSTOR		74	4-646-546-01	SHEET (LOWER), DUST PROTECTION	
61	4-644-740-01	COVER (R), VINE		75	4-646-547-01	SHEET (UPPER), DUST PROTECTION	
62	4-644-741-01	COVER (L), VINE					

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(3) IF-BOX BLOCK SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-644-715-01	COVER, BATTERY		112	1-791-933-11	CORD, CONNECTION (MR)	
102	X-4622-740-1	CABINET (IF) ASSY, UPPER		113	1-791-934-11	CABLE, FLAT (FFC) 17P	
103	3-988-786-11	BUTTON, BATTERY RELEASE		114	3-948-339-61	TAPPING	
104	3-050-073-11	KNOB, POWER		115	4-645-565-01	LABEL, CHARGE CAUTION	
106	1-694-076-21	TERMINAL BOARD, BATTERY		116	3-050-081-11	KNOB, SCREEN	
107	4-644-747-02	PLATE, TERMINAL RETAINER		117	3-936-997-01	SCREW (DIA. 2X20), PRECISION	
108	A-8056-673-A	DD-A02 (C) COMPLETE PWB		118	4-645-961-01	INSULATING SHEET	
109	A-8056-671-A	YM-A01 (C) COMPLETE PWB		119	4-645-724-01	LABEL, CAUTION	
110	4-644-721-01	CABINET (IF), LOWER		121	3-355-445-01	SPRING, COMPRESSION	
111	4-644-722-01	KNOB, USER LOCK					

Confidential

MEMO

Confidential

PLM-A35E (AEP)

5-4
(END)

SECTION 6 ELECTRICAL PARTS LIST

DD-A02

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . . : μ A. . . uPA. . . : μ PA. . .
uPB. . . : μ PB. . . uPC. . . : μ PC. . .
uPD. . . : μ PD. . .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-8056-673-A	DD-A02 (C) COMPLETE PWB *****		D101	8-719-065-58	DIODE 02DZ24-Z (TPH3)	
C102	1-164-506-11	CERAMIC CHIP 4.7uF	16V	D102	8-719-938-75	DIODE SB05-05CP-TB	
C104	1-163-038-91	CERAMIC CHIP 0.1uF	25V	D103	8-719-938-75	DIODE SB05-05CP-TB	
C106	1-126-204-11	ELECT CHIP 47uF	20% 16V	D104	8-719-991-27	LED CL-170G-CD-T (POWER)	
C107	1-107-725-11	CERAMIC CHIP 0.1uF	10% 16V	D108	8-719-987-19	DIODE SB01-15CP-TB	
C108	1-162-909-11	CERAMIC CHIP 4PF	0.25PF 50V	Δ F301	1-533-626-21	FUSE (SMD) 1.25A	125V
				Δ F302	1-533-626-21	FUSE (SMD) 1.25A	125V
C109	1-164-814-91	CERAMIC CHIP 470PF	2% 50V	FB101	1-543-962-22	FERRITE	
C110	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FB103	1-543-962-22	FERRITE	
C112	1-107-727-91	CERAMIC CHIP 0.022uF	10% 16V	FB105	1-216-295-91	SHORT	0
C113	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	FB107	1-216-864-11	SHORT	0
C114	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	FB108	1-216-295-91	SHORT	0
C115	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	FB109	1-216-295-91	SHORT	0
C116	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V	IC101	8-759-060-93	IC MB3785APFV-G-BND-ER	
C117	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	IC102	8-759-085-76	IC S-81332HG-KC-T1	
C118	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	J101	1-695-565-11	JACK, DC (POLARITY UNIFIED TYPE)	(DC IN 9V)
C119	1-162-963-11	CERAMIC CHIP 680PF	10% 50V				
C120	1-162-963-11	CERAMIC CHIP 680PF	10% 50V	L101	1-424-653-11	INDUCTOR 10uH	
C121	1-162-963-11	CERAMIC CHIP 680PF	10% 50V	L102	1-402-831-21	INDUCTOR 68uH	
C122	1-162-963-11	CERAMIC CHIP 680PF	10% 50V	L103	1-414-398-11	INDUCTOR 10uH	
C123	1-126-395-11	ELECT CHIP 22uF	20% 16V	L104	1-424-675-11	INDUCTOR 33uH	
C124	1-126-395-11	ELECT CHIP 22uF	20% 16V	L106	1-412-033-11	INDUCTOR CHIP 220uH	
C125	1-164-506-11	CERAMIC CHIP 4.7uF	16V	L107	1-412-030-11	INDUCTOR CHIP 22uH	
C126	1-117-720-11	CERAMIC CHIP 4.7uF	10V	L108	1-412-028-11	INDUCTOR CHIP 4.7uH	
C127	1-164-506-11	CERAMIC CHIP 4.7uF	16V	L109	1-412-030-11	INDUCTOR CHIP 22uH	
C128	1-164-506-11	CERAMIC CHIP 4.7uF	16V	L110	1-412-030-11	INDUCTOR CHIP 22uH	
C129	1-164-506-11	CERAMIC CHIP 4.7uF	16V				
C131	1-126-393-11	ELECT CHIP 33uF	20% 10V	Q101	8-729-029-14	TRANSISTOR DTC144EUA-T106	
C132	1-126-393-11	ELECT CHIP 33uF	20% 10V	Q102	8-729-804-52	TRANSISTOR 2SB1122-T-TD	
C134	1-164-506-11	CERAMIC CHIP 4.7uF	16V	Q103	8-729-046-98	TRANSISTOR CPH6702-TL	
C135	1-164-506-11	CERAMIC CHIP 4.7uF	16V	Q104	8-729-046-98	TRANSISTOR CPH6702-TL	
C136	1-164-346-11	CERAMIC CHIP 1uF	16V	Q105	8-729-046-98	TRANSISTOR CPH6702-TL	
C137	1-162-638-11	CERAMIC CHIP 1uF	16V				
C138	1-107-727-91	CERAMIC CHIP 0.022uF	10% 16V	R101	1-216-841-11	RES-CHIP 47K	5% 1/16W
C139	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	R102	1-216-841-11	RES-CHIP 47K	5% 1/16W
C140	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	R103	1-216-825-11	RES-CHIP 2.2K	5% 1/16W
C141	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V	R104	1-216-819-11	RES-CHIP 680	5% 1/16W
C142	1-164-156-11	CERAMIC CHIP 0.1uF	25V	R105	1-216-864-11	SHORT	0
C143	1-164-156-11	CERAMIC CHIP 0.1uF	25V				
C144	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V	R106	1-218-867-11	METAL CHIP 6.8K	0.5% 1/16W
* CN101	1-573-768-21	PIN, CONNECTOR (1.5MM) (SMD) 5P		R107	1-218-871-11	METAL CHIP 10K	0.5% 1/16W
CN102	1-774-768-11	CONNECTOR, FFC/FPC 17P		R108	1-218-863-11	METAL CHIP 4.7K	0.5% 1/16W
				R109	1-216-833-91	RES-CHIP 10K	5% 1/16W
				R110	1-216-833-91	RES-CHIP 10K	5% 1/16W

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DD-A02

DL-A01

HP-A01

Ref. No.	Part No.	Description			Remark
R111	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R112	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R113	1-218-903-11	METAL CHIP	220K	0.5%	1/16W
R114	1-218-863-11	METAL CHIP	4.7K	0.5%	1/16W
R115	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R116	1-216-846-11	RES-CHIP	120K	5%	1/16W
R117	1-216-845-11	RES-CHIP	100K	5%	1/16W
R118	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R119	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R120	1-216-855-11	RES-CHIP	680K	5%	1/16W
R121	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R122	1-218-863-11	METAL CHIP	4.7K	0.5%	1/16W
R123	1-218-879-11	METAL CHIP	22K	0.5%	1/16W
R124	1-218-873-11	METAL CHIP	12K	0.5%	1/16W
R125	1-218-863-11	METAL CHIP	4.7K	0.5%	1/16W
R126	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R127	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R128	1-216-853-11	RES-CHIP	470K	5%	1/16W
R129	1-216-853-11	RES-CHIP	470K	5%	1/16W
R130	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R131	1-218-881-11	METAL CHIP	27K	0.5%	1/16W
R132	1-218-895-11	METAL CHIP	100K	0.5%	1/16W
R133	1-218-881-11	METAL CHIP	27K	0.5%	1/16W
R134	1-216-845-11	RES-CHIP	100K	5%	1/16W
R135	1-216-846-11	RES-CHIP	120K	5%	1/16W
R136	1-216-817-11	RES-CHIP	470	5%	1/16W
R137	1-216-817-11	RES-CHIP	470	5%	1/16W
R138	1-216-817-11	RES-CHIP	470	5%	1/16W
R139	1-216-817-11	RES-CHIP	470	5%	1/16W
R140	1-216-845-11	RES-CHIP	100K	5%	1/16W
R141	1-216-797-11	RES-CHIP	10	5%	1/16W
R142	1-216-295-91	SHORT	0		
R143	1-216-853-11	RES-CHIP	470K	5%	1/16W
R146	1-216-864-11	SHORT	0		
S101	1-771-331-21	SWITCH, PUSH (1 KEY) (ON/OFF (POWER))			
S102	1-571-787-31	SWITCH, TACTILE (START/BATT CHECK)			
T101	1-429-719-21	TRANSFORMER. DC-DC CONVERTER			

A-8056-669-A DL-A01 COMPLETE PWB

C911	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C913	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C914	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C915	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C916	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C918	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C919	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C920	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C921	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C922	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C923	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C924	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C925	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C928	1-164-156-11	CERAMIC CHIP	0.1uF		25V

* CN911 1-691-921-11 CONNECTOR, BOARD TO BOARD 10P

Ref. No.	Part No.	Description	Remark		
CT911	1-141-367-51	CAP, CHIP TRIMMER 20PF			
FL911	1-233-455-21	FILTER, BAND PASS			
FL912	1-459-949-11	COIL			
IC911	8-752-353-94	IC CXL5505M-T4			
L911	1-414-754-11	INDUCTOR	10uH		
Q911	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
Q912	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
Q913	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX		
Q914	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
Q915	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
R911	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R912	1-216-857-11	RES-CHIP	1M	5%	1/16W
R913	1-216-844-11	RES-CHIP	82K	5%	1/16W
R914	1-216-821-11	RES-CHIP	1K	5%	1/16W
R915	1-216-851-11	RES-CHIP	330K	5%	1/16W
R916	1-216-854-11	RES-CHIP	560K	5%	1/16W
R917	1-216-811-11	RES-CHIP	150	5%	1/16W
R918	1-216-821-11	RES-CHIP	1K	5%	1/16W
R919	1-216-821-11	RES-CHIP	1K	5%	1/16W
R920	1-216-841-11	RES-CHIP	47K	5%	1/16W
R921	1-216-841-11	RES-CHIP	47K	5%	1/16W
R922	1-216-821-11	RES-CHIP	1K	5%	1/16W
R923	1-216-821-11	RES-CHIP	1K	5%	1/16W
R924	1-216-821-11	RES-CHIP	1K	5%	1/16W
R925	1-218-288-11	RES-CHIP	300	5%	1/16W
R926	1-216-821-11	RES-CHIP	1K	5%	1/16W

RV911 1-223-272-11 RES, ADJ, CERMET 470

A-8056-675-A HP-A01 (C) MOUNTED PWB

C701	1-164-346-11	CERAMIC CHIP	1uF	16V
C702	1-164-346-11	CERAMIC CHIP	1uF	16V
C703	1-164-346-11	CERAMIC CHIP	1uF	16V
C704	1-164-346-11	CERAMIC CHIP	1uF	16V
C705	1-164-346-11	CERAMIC CHIP	1uF	16V
CN701	1-691-534-11	CONNECTOR, BOARD TO BOARD 20P		
CN702	1-573-356-21	CONNECTOR, FFC/FPC 16P		
CN703	1-573-356-21	CONNECTOR, FFC/FPC 16P		
CN704	1-770-622-21	PIN, CONNECTOR 5P		
CN705	1-573-915-11	CONNECTOR, FFC/FPC (ZIF) 6P		
CN706	1-573-915-11	CONNECTOR, FFC/FPC (ZIF) 6P		
D702	8-719-017-13	DIODE	02DZ7.5-TPH3	
D703	8-719-017-13	DIODE	02DZ7.5-TPH3	
D704	8-719-017-13	DIODE	02DZ7.5-TPH3	
D705	8-719-017-13	DIODE	02DZ7.5-TPH3	
Q701	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q702	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q703	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q704	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q705	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q706	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	
Q707	8-729-402-38	TRANSISTOR	2SD1819A-R-TX	

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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q708	8-729-402-38	TRANSISTOR	2SD1819A-R-TX			C821	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
Q709	8-729-402-38	TRANSISTOR	2SD1819A-R-TX			C822	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
Q710	8-729-402-38	TRANSISTOR	2SD1819A-R-TX			C823	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
R701	1-216-864-11	SHORT	0			C825	1-164-346-11	CERAMIC CHIP	1uF		16V
R702	1-216-864-11	SHORT	0			C826	1-164-346-11	CERAMIC CHIP	1uF		16V
R703	1-216-864-11	SHORT	0			C827	1-164-346-11	CERAMIC CHIP	1uF		16V
R704	1-216-864-11	SHORT	0			C828	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
R705	1-216-864-11	SHORT	0			C829	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R707	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	C830	1-165-319-11	CERAMIC CHIP	0.1uF		50V
R708	1-216-837-11	RES-CHIP	22K	5%	1/16W	C831	1-164-346-11	CERAMIC CHIP	1uF		16V
R709	1-216-837-11	RES-CHIP	22K	5%	1/16W	C832	1-164-346-11	CERAMIC CHIP	1uF		16V
R710	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	C833	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R712	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	C834	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R713	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	C835	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R714	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	C836	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R715	1-216-805-11	RES-CHIP	47	5%	1/16W	C902	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
R716	1-216-805-11	RES-CHIP	47	5%	1/16W	C903	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
R717	1-216-805-11	RES-CHIP	47	5%	1/16W	* CN801	1-793-152-21	CONNECTOR	11P		
R718	1-216-832-11	RES-CHIP	8.2K	5%	1/16W	* CN802	1-691-514-11	CONNECTOR, BOARD TO BOARD	20P		
R719	1-216-837-11	RES-CHIP	22K	5%	1/16W	* CN803	1-573-984-11	CONNECTOR, BOARD TO BOARD	10P		
R720	1-216-837-11	RES-CHIP	22K	5%	1/16W	* CN901	1-573-984-11	CONNECTOR, BOARD TO BOARD	10P		
R721	1-216-832-11	RES-CHIP	8.2K	5%	1/16W						
R722	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	D801	8-719-066-17	DIODE	FTZ6.8E-T148		
R723	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	IC801	8-752-086-00	IC	CXA3017R-T6		
R724	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	IC804	8-759-430-57	IC	M62367GP-75ED		
R725	1-216-805-11	RES-CHIP	47	5%	1/16W	L801	1-414-754-11	INDUCTOR	10uH		
R726	1-216-805-11	RES-CHIP	47	5%	1/16W	L802	1-414-754-11	INDUCTOR	10uH		
R727	1-216-805-11	RES-CHIP	47	5%	1/16W	L803	1-414-754-11	INDUCTOR	10uH		
R729	1-216-864-11	SHORT	0			L804	1-414-754-11	INDUCTOR	10uH		
R730	1-216-864-11	SHORT	0			Q811	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
R731	1-216-864-11	SHORT	0			Q812	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX		
R732	1-216-864-11	SHORT	0			Q813	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
TH701	1-810-812-21	THERMISTOR, NTC (1608)				Q814	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX		
TH702	1-810-812-21	THERMISTOR, NTC (1608)				Q830	8-729-403-27	TRANSISTOR	XN4401-(TW)		

A-8056-676-A RG-A01 (C) COMPLETE PWB											

C801	1-107-686-11	TANTALUM CHIP	4.7uF	20%	16V	Q831	8-729-403-27	TRANSISTOR	XN4401-(TW)		
C802	1-162-974-11	CERAMIC CHIP	0.01uF		50V	Q901	8-729-420-24	TRANSISTOR	2SB1218A-QRS-TX		
C803	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V	R801	1-216-864-11	SHORT	0		
C804	1-162-974-11	CERAMIC CHIP	0.01uF		50V	R802	1-216-864-11	SHORT	0		
C805	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V	R803	1-216-864-11	SHORT	0		
C806	1-162-974-11	CERAMIC CHIP	0.01uF		50V	R804	1-216-864-11	SHORT	0		
C807	1-135-150-91	TANTALUM CHIP	3.3uF	20%	6.3V	R805	1-216-864-11	SHORT	0		
C808	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V	R806	1-216-864-11	SHORT	0		
C809	1-162-974-11	CERAMIC CHIP	0.01uF		50V	R807	1-216-864-11	SHORT	0		
C810	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	R808	1-216-864-11	SHORT	0		
C811	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	R810	1-216-864-11	SHORT	0		
C812	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	R811	1-216-833-91	RES-CHIP	10K	5%	1/16W
C813	1-162-974-11	CERAMIC CHIP	0.01uF		50V	R812	1-216-816-11	RES-CHIP	390	5%	1/16W
C814	1-164-237-11	CERAMIC CHIP	16PF	5%	50V	R813	1-216-864-11	SHORT	0		
C815	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	R814	1-216-864-11	SHORT	0		
C816	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	R815	1-216-864-11	SHORT	0		
C817	1-164-346-11	CERAMIC CHIP	1uF		16V	R816	1-216-864-11	SHORT	0		
C818	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V	R817	1-216-864-11	SHORT	0		
C819	1-164-156-11	CERAMIC CHIP	0.1uF		25V	R818	1-216-864-11	SHORT	0		
C820	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	R819	1-216-864-11	SHORT	0		
						R820	1-216-864-11	SHORT	0		
						R822	1-216-864-11	SHORT	0		

Ref. No.	Part No.	Description	Remark			
R823	1-216-864-11	SHORT	0			
R824	1-216-864-11	SHORT	0			
R825	1-216-833-91	RES-CHIP	10K	5%	1/16W	
R826	1-216-834-11	RES-CHIP	12K	5%	1/16W	
R827	1-216-836-11	RES-CHIP	18K	5%	1/16W	
R828	1-216-834-11	RES-CHIP	12K	5%	1/16W	
R829	1-216-836-11	RES-CHIP	18K	5%	1/16W	
R830	1-216-812-11	RES-CHIP	180	5%	1/16W	
R831	1-216-812-11	RES-CHIP	180	5%	1/16W	
R832	1-216-833-91	RES-CHIP	10K	5%	1/16W	
R833	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	
R834	1-216-837-11	RES-CHIP	22K	5%	1/16W	
R835	1-216-812-11	RES-CHIP	180	5%	1/16W	
R836	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	
R837	1-216-833-91	RES-CHIP	10K	5%	1/16W	
R838	1-216-833-91	RES-CHIP	10K	5%	1/16W	
R839	1-216-837-11	RES-CHIP	22K	5%	1/16W	
R840	1-216-864-11	SHORT	0			
R841	1-216-864-11	SHORT	0			
R842	1-216-837-11	RES-CHIP	22K	5%	1/16W	
R843	1-216-864-11	SHORT	0			
R844	1-216-864-11	SHORT	0			
R845	1-216-864-11	SHORT	0			
R846	1-216-864-11	SHORT	0			
R847	1-216-864-11	SHORT	0			
R848	1-216-864-11	SHORT	0			
R849	1-216-864-11	SHORT	0			
R851	1-216-817-11	RES-CHIP	470	5%	1/16W	
R855	1-216-819-11	RES-CHIP	680	5%	1/16W	
R856	1-216-819-11	RES-CHIP	680	5%	1/16W	
R857	1-216-821-11	RES-CHIP	1K	5%	1/16W	
R861	1-216-819-11	RES-CHIP	680	5%	1/16W	
R862	1-216-819-11	RES-CHIP	680	5%	1/16W	
R863	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	
R864	1-216-837-11	RES-CHIP	22K	5%	1/16W	
R865	1-216-864-11	SHORT	0			
R866	1-216-864-11	SHORT	0			
R873	1-216-864-11	SHORT	0			
R874	1-216-864-11	SHORT	0			
R876	1-216-864-11	SHORT	0			
R902	1-216-821-11	RES-CHIP	1K	5%	1/16W	
R903	1-216-864-11	SHORT	0			
R906	1-216-864-11	SHORT	0			
R908	1-216-828-11	RES-CHIP	3.9K	5%	1/16W	
X801	1-579-661-21	OSCILLATOR, CRYSTAL (4.433619MHz)				

A-8056-671-A YM-A01 (C) COMPLETE PWB						

C201	1-124-779-21	ELECT CHIP	10uF	20%	16V	
C202	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	
C203	1-164-230-11	CERAMIC CHIP	220PF	5%	50V	
C204	1-115-156-11	CERAMIC CHIP	1uF		10V	
C205	1-115-156-11	CERAMIC CHIP	1uF		10V	
C207	1-126-198-21	ELECT CHIP	4.7uF	20%	35V	
C208	1-126-198-21	ELECT CHIP	4.7uF	20%	35V	
C209	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	

Ref. No.	Part No.	Description	Remark			
C210	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
C211	1-164-390-91	CERAMIC CHIP	330PF	5%	50V	
C212	1-164-390-91	CERAMIC CHIP	330PF	5%	50V	
C214	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C215	1-124-778-21	ELECT CHIP	22uF	20%	6.3V	
C216	1-164-346-11	CERAMIC CHIP	1uF		16V	
C217	1-124-779-21	ELECT CHIP	10uF	20%	16V	
C218	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C219	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C220	1-164-346-11	CERAMIC CHIP	1uF		16V	
C222	1-115-156-11	CERAMIC CHIP	1uF		10V	
C223	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C224	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C225	1-164-346-11	CERAMIC CHIP	1uF		16V	
C226	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C227	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C228	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C229	1-126-210-21	ELECT CHIP	220uF	20%	4V	
C232	1-124-779-21	ELECT CHIP	10uF	20%	16V	
C301	1-124-778-21	ELECT CHIP	22uF	20%	6.3V	
C302	1-164-346-11	CERAMIC CHIP	1uF		16V	
C303	1-124-778-21	ELECT CHIP	22uF	20%	6.3V	
C304	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C305	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C306	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C307	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C308	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C309	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C312	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C313	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C314	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C315	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C316	1-164-346-11	CERAMIC CHIP	1uF		16V	
C317	1-163-038-91	CERAMIC CHIP	0.1uF		25V	
C318	1-124-779-21	ELECT CHIP	10uF	20%	16V	
C319	1-162-921-11	CERAMIC CHIP	33PF	5%	50V	
C320	1-162-918-11	CERAMIC CHIP	18PF	5%	50V	
C321	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C322	1-135-150-91	TANTALUM CHIP	3.3uF	20%	6.3V	
C324	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C327	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C328	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C330	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C331	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C333	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C334	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C335	1-109-864-91	CERAMIC CHIP	68PF	2%	50V	
C336	1-109-864-91	CERAMIC CHIP	68PF	2%	50V	
C337	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C338	1-162-974-11	CERAMIC CHIP	0.01uF		50V	
C339	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C340	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C341	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C342	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
C344	1-164-156-11	CERAMIC CHIP	0.1uF		25V	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C346	1-162-921-11	CERAMIC CHIP 33PF	5% 50V	FB403	1-216-864-11	SHORT	0
C402	1-124-778-21	ELECT CHIP 22uF	20% 6.3V	FB404	1-216-864-11	SHORT	0
C403	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FB405	1-216-864-11	SHORT	0
C404	1-124-778-21	ELECT CHIP 22uF	20% 6.3V	FB406	1-216-864-11	SHORT	0
C405	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FB407	1-216-295-91	SHORT	0
C406	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FB408	1-216-295-91	SHORT	0
C407	1-164-156-11	CERAMIC CHIP 0.1uF	25V	FL401	1-234-185-21	FILTER, ENCAPSULATED	
C408	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC201	8-759-482-30	IC BA3574BFS-E2	
C409	1-124-778-21	ELECT CHIP 22uF	20% 6.3V	IC301	8-759-653-13	IC MB89082PFV-G-118-BND	
C410	1-124-778-21	ELECT CHIP 22uF	20% 6.3V	IC302	8-759-468-72	IC AK6420AM-E2	
C411	1-109-982-11	CERAMIC CHIP 1uF	10% 10V	IC303	8-759-512-70	IC S-81350HG-KD-T1	
C412	1-162-921-11	CERAMIC CHIP 33PF	5% 50V	IC304	8-759-519-46	IC S-80730AN-DT-T1	
C413	1-162-921-11	CERAMIC CHIP 33PF	5% 50V	IC401	8-759-446-66	IC MM1113XFBE	
C414	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC402	8-759-446-66	IC MM1113XFBE	
C415	1-135-259-11	TANTALUM CHIP 10uF	20% 6.3V	IC404	8-759-653-14	IC MSM5258MS-KR1	
C416	1-164-156-11	CERAMIC CHIP 0.1uF	25V	IC405	8-759-081-44	IC TC74VHC04F (EL)	
C417	1-162-923-11	CERAMIC CHIP 47PF	5% 50V	IC407	8-759-256-43	IC NJM2903M-TE2	
C418	1-164-156-11	CERAMIC CHIP 0.1uF	25V	J401	1-779-870-11	CONNECTOR (ROUND TYPE) 4P (S VIDEO IN)	
C419	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V	J402	1-778-040-11	JACK, SMALL TYPE (A/V IN)	
C422	1-124-778-21	ELECT CHIP 22uF	20% 6.3V	L302	1-216-295-91	SHORT	0
C423	1-164-156-11	CERAMIC CHIP 0.1uF	25V	L303	1-216-295-91	SHORT	0
CN302	1-774-768-11	CONNECTOR, FFC/FPC 17P		L304	1-414-081-11	INDUCTOR	33uH
CN303	1-770-624-21	PIN, CONNECTOR 7P		L305	1-412-960-71	INDUCTOR	56uH
CN304	1-770-626-21	PIN, CONNECTOR 9P		L307	1-216-295-91	SHORT	0
CN305	1-691-550-11	PIN, CONNECTOR (1.5MM) (SMD) 3P		L401	1-216-295-91	SHORT	0
* CN306	1-573-984-11	CONNECTOR, BOARD TO BOARD 10P		PS301	1-576-123-21	LINK, IC	
D307	8-719-941-09	DIODE DAP202UT106		Q201	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D311	8-719-066-17	DIODE FTZ6.8E-T148		Q202	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D316	8-719-017-13	DIODE 02DZ7.5-TPH3		Q203	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D401	8-719-017-13	DIODE 02DZ7.5-TPH3		Q301	8-729-402-84	TRANSISTOR	XN4601-TW
D402	8-719-017-13	DIODE 02DZ7.5-TPH3		Q302	8-729-402-84	TRANSISTOR	XN4601-TW
D403	8-719-017-13	DIODE 02DZ7.5-TPH3		Q303	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D404	8-719-017-13	DIODE 02DZ7.5-TPH3		Q304	8-729-420-12	TRANSISTOR	XN4213-TW
D405	8-719-017-13	DIODE 02DZ7.5-TPH3		Q305	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D406	8-719-017-13	DIODE 02DZ7.5-TPH3		Q401	8-729-029-14	TRANSISTOR	DTC144EUA-T106
D407	8-719-017-13	DIODE 02DZ7.5-TPH3		Q402	8-729-402-81	TRANSISTOR	XN4501-TW
D408	8-719-017-13	DIODE 02DZ7.5-TPH3		Q408	8-729-420-29	TRANSISTOR	2SD1819A-QRS-TX
D409	8-719-017-13	DIODE 02DZ7.5-TPH3		Q413	8-729-029-14	TRANSISTOR	DTC144EUA-T106
D410	8-719-017-13	DIODE 02DZ7.5-TPH3		R201	1-216-821-11	RES-CHIP	1K 5% 1/16W
D411	8-719-017-13	DIODE 02DZ7.5-TPH3		R202	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB301	1-216-864-11	SHORT	0	R205	1-216-845-11	RES-CHIP	100K 5% 1/16W
FB302	1-216-864-11	SHORT	0	R206	1-216-853-11	RES-CHIP	470K 5% 1/16W
FB303	1-216-295-91	SHORT	0	R207	1-216-845-11	RES-CHIP	100K 5% 1/16W
FB304	1-216-295-91	SHORT	0	R208	1-216-853-11	RES-CHIP	470K 5% 1/16W
FB305	1-216-864-11	SHORT	0	R209	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
FB306	1-216-295-91	SHORT	0	R210	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
FB307	1-216-864-11	SHORT	0	R211	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
FB308	1-216-864-11	SHORT	0	R212	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
FB309	1-216-864-11	SHORT	0	R213	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
FB310	1-216-864-11	SHORT	0	R214	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
FB311	1-216-864-11	SHORT	0	R215	1-216-824-11	RES-CHIP	1.8K 5% 1/16W
FB312	1-216-295-91	SHORT	0	R216	1-216-824-11	RES-CHIP	1.8K 5% 1/16W
FB313	1-216-295-91	SHORT	0	R217	1-216-821-11	RES-CHIP	1K 5% 1/16W
FB314	1-216-295-91	SHORT	0	R219	1-216-857-11	RES-CHIP	1M 5% 1/16W
FB315	1-216-295-91	SHORT	0				
FB401	1-216-864-11	SHORT	0				
FB402	1-216-864-11	SHORT	0				

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R220	1-216-864-11	SHORT	0			R357	1-216-845-11	RES-CHIP	100K	5%	1/16W
R221	1-216-789-11	RES-CHIP	2.2	5%	1/16W	R361	1-216-838-11	RES-CHIP	27K	5%	1/16W
R222	1-216-789-11	RES-CHIP	2.2	5%	1/16W	R362	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R223	1-216-864-11	SHORT	0			R363	1-216-821-11	RES-CHIP	1K	5%	1/16W
R224	1-216-864-11	SHORT	0			R364	1-216-821-11	RES-CHIP	1K	5%	1/16W
R225	1-216-805-11	RES-CHIP	47	5%	1/16W	R365	1-216-821-11	RES-CHIP	1K	5%	1/16W
R226	1-216-833-91	RES-CHIP	10K	5%	1/16W	R366	1-216-845-11	RES-CHIP	100K	5%	1/16W
R227	1-216-845-11	RES-CHIP	100K	5%	1/16W	R367	1-216-295-91	SHORT	0		
R301	1-216-833-91	RES-CHIP	10K	5%	1/16W	R368	1-216-295-91	SHORT	0		
R302	1-216-833-91	RES-CHIP	10K	5%	1/16W	R371	1-216-834-11	RES-CHIP	12K	5%	1/16W
R303	1-216-833-91	RES-CHIP	10K	5%	1/16W	R372	1-216-834-11	RES-CHIP	12K	5%	1/16W
R304	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R373	1-216-819-11	RES-CHIP	680	5%	1/16W
R305	1-216-815-11	RES-CHIP	330	5%	1/16W	R374	1-216-809-11	RES-CHIP	100	5%	1/16W
R306	1-216-833-91	RES-CHIP	10K	5%	1/16W	R375	1-216-295-91	SHORT	0		
R307	1-216-833-91	RES-CHIP	10K	5%	1/16W	R401	1-218-285-11	RES-CHIP	75	5%	1/16W
R308	1-216-821-11	RES-CHIP	1K	5%	1/16W	R402	1-218-285-11	RES-CHIP	75	5%	1/16W
R309	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R403	1-218-285-11	RES-CHIP	75	5%	1/16W
R310	1-216-815-11	RES-CHIP	330	5%	1/16W	R404	1-216-295-91	SHORT	0		
R311	1-218-285-11	RES-CHIP	75	5%	1/16W	R405	1-216-821-11	RES-CHIP	1K	5%	1/16W
R312	1-216-845-11	RES-CHIP	100K	5%	1/16W	R406	1-216-821-11	RES-CHIP	1K	5%	1/16W
R313	1-216-845-11	RES-CHIP	100K	5%	1/16W	R407	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R315	1-216-845-11	RES-CHIP	100K	5%	1/16W	R408	1-216-833-91	RES-CHIP	10K	5%	1/16W
R316	1-216-845-11	RES-CHIP	100K	5%	1/16W	R410	1-216-833-91	RES-CHIP	10K	5%	1/16W
R318	1-216-841-11	RES-CHIP	47K	5%	1/16W	R412	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R319	1-216-821-11	RES-CHIP	1K	5%	1/16W	R413	1-216-833-91	RES-CHIP	10K	5%	1/16W
R320	1-216-821-11	RES-CHIP	1K	5%	1/16W	R414	1-216-857-11	RES-CHIP	1M	5%	1/16W
R321	1-216-821-11	RES-CHIP	1K	5%	1/16W	R415	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R322	1-216-821-11	RES-CHIP	1K	5%	1/16W	R416	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R323	1-216-821-11	RES-CHIP	1K	5%	1/16W	R417	1-216-809-11	RES-CHIP	100	5%	1/16W
R324	1-216-821-11	RES-CHIP	1K	5%	1/16W	R419	1-216-857-11	RES-CHIP	1M	5%	1/16W
R325	1-216-821-11	RES-CHIP	1K	5%	1/16W	R420	1-216-841-11	RES-CHIP	47K	5%	1/16W
R326	1-216-821-11	RES-CHIP	1K	5%	1/16W	R421	1-216-833-91	RES-CHIP	10K	5%	1/16W
R327	1-216-821-11	RES-CHIP	1K	5%	1/16W	R422	1-216-839-11	RES-CHIP	33K	5%	1/16W
R328	1-216-821-11	RES-CHIP	1K	5%	1/16W	R423	1-216-839-11	RES-CHIP	33K	5%	1/16W
R329	1-216-851-11	RES-CHIP	330K	5%	1/16W	R424	1-216-836-11	RES-CHIP	18K	5%	1/16W
R330	1-216-853-11	RES-CHIP	470K	5%	1/16W	R425	1-216-821-11	RES-CHIP	1K	5%	1/16W
R331	1-216-849-11	RES-CHIP	220K	5%	1/16W	R426	1-216-837-11	RES-CHIP	22K	5%	1/16W
R332	1-216-833-91	RES-CHIP	10K	5%	1/16W	R427	1-216-833-91	RES-CHIP	10K	5%	1/16W
R334	1-216-817-11	RES-CHIP	470	5%	1/16W	R431	1-216-843-11	RES-CHIP	68K	5%	1/16W
R335	1-216-864-11	SHORT	0			R441	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R336	1-216-864-11	SHORT	0			R442	1-216-864-11	SHORT	0		
R337	1-216-833-91	RES-CHIP	10K	5%	1/16W	R446	1-216-833-91	RES-CHIP	10K	5%	1/16W
R338	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R447	1-216-833-91	RES-CHIP	10K	5%	1/16W
R339	1-216-821-11	RES-CHIP	1K	5%	1/16W	R459	1-216-864-11	SHORT	0		
R340	1-216-821-11	RES-CHIP	1K	5%	1/16W	R460	1-216-864-11	SHORT	0		
R342	1-216-821-11	RES-CHIP	1K	5%	1/16W	R461	1-216-864-11	SHORT	0		
R344	1-216-821-11	RES-CHIP	1K	5%	1/16W	R462	1-216-821-11	RES-CHIP	1K	5%	1/16W
R345	1-216-845-11	RES-CHIP	100K	5%	1/16W	R463	1-216-821-11	RES-CHIP	1K	5%	1/16W
R346	1-216-821-11	RES-CHIP	1K	5%	1/16W	R465	1-216-864-11	SHORT	0		
R347	1-216-845-11	RES-CHIP	100K	5%	1/16W	RV201	1-241-748-11	RES, VAR, CARBON 10K/10K (VOL)			
R348	1-216-841-11	RES-CHIP	47K	5%	1/16W	RV301	1-227-156-11	RES, VAR, CARBON 50K (BRIGHT)			
R349	1-216-841-11	RES-CHIP	47K	5%	1/16W	S201	1-572-922-11	SWITCH, SLIDE (AVLS)			
R350	1-216-821-11	RES-CHIP	1K	5%	1/16W	S301	1-572-922-11	SWITCH, SLIDE (USER LOCK)			
R351	1-216-821-11	RES-CHIP	1K	5%	1/16W	X301	1-767-300-21	VIBRATOR, CRYSTAL (32.768kHz)			
R352	1-216-833-91	RES-CHIP	10K	5%	1/16W	X401	1-577-247-11	VIBRATOR, CERAMIC (3.58MHz)			
R353	1-216-829-11	RES-CHIP	4.7K	5%	1/16W						
R354	1-216-841-11	RES-CHIP	47K	5%	1/16W						
R355	1-216-821-11	RES-CHIP	1K	5%	1/16W						

Ref. No.	Part No.	Description	Remark
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XTL301	1-579-369-21	VIBRATOR (10MHz)	
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ACCESSORIES & PACKING MATERIALS

△	1-475-456-24	ADAPTOR, AC (AC-PLM2)	
△*	1-575-131-31	CORD, POWER	
	1-777-690-11	CORD, CONNECTION	
	1-782-711-11	CABLE, AV MONITOR	
	3-868-186-31	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, GERMAN)	
	3-868-186-41	MANUAL, INSTRUCTION	
		(DUTCH, SPANISH, ITALIAN)	
	4-644-701-32	PAD, NOSE	
	4-646-244-01	PAD	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

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